

THESIS FOR DOCTOR OF PHILOSOPHY

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Mosaic Narrative
A Poetics of
Cinematic New Media Narrative

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CERTIFICATION OF DISSERTATION

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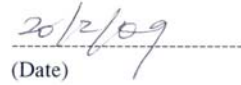


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Abstract

Mosaic Narrative

A Poetics of Cinematic New Media Narrative

This thesis proposes the *Poetics of Mosaic Narrative* as a tool for theorising the creation and telling of cinematic stories in a digital environment. As such the *Poetics of Mosaic Narrative* is designed to assist creators of new media narrative to design dramatically compelling screen based stories by drawing from established theories of cinema and emerging theories of new media. In doing so it validates the crucial element of cinematic storytelling in the digital medium, which due to its fragmentary, variable and re-combinatory nature, affords the opportunity for audience interaction.

The *Poetics of Mosaic Narrative* re-asserts the dramatic and cinematic nature of narrative in new media by drawing upon the dramatic theory of Aristotle's *Poetics*, the cinematic theories of the 1920s Russian Film Theorists and contemporary Neo-Formalists, the narrative theories of the 1960s French Structuralists, and the scriptwriting theories of contemporary cinema. In particular it focuses on the theory and practice of the prominent new media theorist, Lev Manovich, as a means of investigating and creating a practical poetics.

The key element of the *Poetics of Mosaic Narrative* is the expansion of the previously forgotten and undeveloped Russian Formalist concept of *cinematurgy* which is vital to the successful development of new media storytelling theory and practice. This concept, as originally proposed but not elaborated by Kazansky, encompasses the notion of the creation of cinematic new media narrative as a *mosaic* – integrally driven by the narrative systems of plot, as well as the cinematic systems of visual style created by the techniques of cinema- montage, cinematography and mise-en-scene.

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CHAPTER 1: NEW MEDIA STORYTELLING

INTRODUCTION

The cultural and technological implications of creating and delivering new media stories to audiences in “The Information Age” have widespread ramifications. They are the key drivers of research and innovation for the media industry, for government communications policy, for university media laboratories, and for the computer games industry, because they affect “the convergence of technologies and markets in telecommunications, information technology, broadcasting and media industries” (Department of Communications, Information Technology and the Arts [DCITA], 2004: 14-160). The new media phenomena of interactivity and convergence and the ability to tell stories “anywhere, anytime” that have been afforded by such new media tools as the Internet, are some of the most important technological factors contributing to the globalization of economies and cultures (DCITA, 2004: 14-160). Therefore the development of a theory formalizing an understanding of both the art and technology of new media storytelling is of vital interest to key stakeholders in the design, research, commerce, policy development and systems of innovation and control in the new media ecology. Such a comprehensive theory does not yet exist (Reiser and Zapp, 2002: xxvi; Davenport, 2005: 2; Del Favero, Brown, Shaw, and Weibel, 2005: 1).

Contemporary technological and theoretical developments in new media storytelling have promoted a search for alternative models in narrative theory (Laurel, 1993; Davenport, 1996; Murray, 1997; Aarseth, 1997; Hermann, 1999; Manovich, 2001; Ryan, 2001, 2004; Reiser and Zapp, 2002). These models have focussed on the concept that in the digital medium the audience may become involved in or “interact” with narrative material and its delivery in a variety of ways. These notions of “interactivity” range from the conception of interactivity as a functional process based on intellectual reasoning (Manovich, 2001; Aarseth, 1997); to interactivity as a form of imagined virtual, dramatic involvement in a computer generated world (Laurel, 1993; Murray, 1997); to interactivity

as a direct audience response to a reality television program; and finally to interactivity as the everyday process of “clicking” the computer mouse to activate a computer program or internet site. In the final analysis all of these “interactions”, whether they appear to be the result of an intellectual process or an intuitive response, involve the audience or user in a notion of engagement with what has previously been seen as a “fixed” medium with no inbuilt interactive protocols.

This imperative to orchestrate and ensure the interaction or engagement of the audience with computer based storytelling is essentially the “holy grail” of contemporary new media research for theorists like Laurel, 1993; Davenport, 1996; Murray, 1997; Aarseth, 1997; Manovich, 2001 and Ryan, 2001, 2004. However it is apparent that in their research these theorists have neglected to consider these “interactions” in terms of the interdependent narratological, dramatic and cinematic properties of the digital medium.

In order to create new models and scenarios for the emerging “interactive” genres of electronic visual storytelling – interactive television, interactive cinema, computer games, digital installations and net art, new theoretic tools are required for their description and analysis.

1.1 THESIS AIM

This thesis addresses the need for a theory that enables designers of new media storytelling to structure and facilitate audience interactivity in the creation of new media narrative in terms of the dramatic and cinematic properties of storytelling in a digital screen based medium. In particular it focuses on moving images recorded via “cinematic capture” (Brown et al, 2003: 1) a distinction which sets cinematic narrative apart from, for example, the computer generated digital images of computer games. This distinction calls attention to the filmic nature of the moving image and the long history of theory that has been developed about storytelling in cinema.

To this end this thesis provides an original critique of theories of, and theorizing about, the narratological and cinematic foundations of new media narrative. It will be shown that recent attempts – for example, by Manovich (2001) – to theorize new media objects (that is computer based, digital collections of various types of data – graphical, textual, audio and visual) in terms of their visual, graphical and computational conventions over their narratological and cinematic functions, although provocative and ground breaking, fall short of being a comprehensive theory.

This thesis, as a critique of influential but imperfect new media narrative theory, will provide new media with a reconstituted theoretical foundation, a “conceptual framework” or “poetics” (Bordwell, 1989a: 273), for which the term “Mosaic Narrative” has been coined. The development of the *Poetics of Mosaic Narrative* will re-establish the storytelling paradigms of cinematic narrativity, including those exemplified in new media interactive cinema, interactive television, computer games, digital installations and net art.

The major focus of the thesis is to consider the essential differences and similarities that the various forms of contemporary new media narrative reveal about the theories and practices of the art of narrative and cinematic storytelling in new media. This exploration is based on the concepts and perspectives of Formalist and Neo-Formalist film theory, Structuralist literary theory, narrative theory and scriptwriting theory but is not limited to these. To critique the design and creation of a typical cinematic new media object it is useful to apply Formalist theories of form and function. In this thesis the Formalist, functionalist perspective is linked to a tradition that includes Aristotle, the work of the 1920s Russian Formalists, the Soviet Montage film theory of Sergei Eisenstein (1925-45), the Neo-Formalist theories of David Bordwell (1985, 2001, 2008) and contemporary craft-based scriptwriting theory (McKee, 1998; Aronson, 2000). To critique the structure and design of a typical new media “object” it is useful to apply the Structuralist theories of the isolatable aspects and structures of a text. In this thesis such theories are derived from the predominantly taxonomic enterprises of Propp (1968) and the French Structuralists, Barthes (1977) and Metz (1974). The practical Structuralist approach

utilized is derived from a more contemporary application of Structuralism as exemplified in, for example, Aronson's Parallel Narrative Theory (2000a).

Overall this thesis argues that recent new media theory and research fall short when it comes to describing storytelling in new media, and endeavours to show why a new theoretical approach is needed. To reiterate, the final aim of this thesis therefore is to produce a conceptual framework for a poetics of new media narrative termed "Mosaic Narrative" and to identify the key elements of this perspective. It is argued that a poetics, which combines elements of both Formalist and Structuralist theories, is essential for designers of new media storytelling in order to create effective and engaging narratives which afford the potential for impelling interactivity.

1.2 THESIS ORIGINS

The more prominent thinkers found in the literature of new media narrative theory (Laurel, 1993; Murray, 1997; Aarseth, 1997; Ryan, 2001, 2004; Manovich, 2001; Reiser and Zapp, 2002) sharply distinguish the principles of storytelling of so-called "old media" (the analogue forms of film, video tape, LPs, audio tape) on the one hand, from the "digital storytelling" of so-called interactive "new media" (film, video, audio and animated forms resulting from computerised operations).

The lack of capacity of old media to provide for spectator interactivity is considered to be the key difference between old media and the new media (Miller, 2004: xiii). In *New Screen Media: Cinema / Art / Narrative* (2002), Reiser and Zapp assert that audience interactivity is the main challenge facing the future of new cinematic and broadcast story formats (Reiser and Zapp, 2002: xxv). In his authoritative work on new media theory, *The Language of New Media* (2001), Lev Manovich asserts that new media narrative is "cinematographic in appearance, digital on the level of its material, and computational (i.e. software driven) in its logic" (Manovich, 2001: 180). Manovich examines the nature of the digital image, the cinematic notions of montage and illusion, the literary notion of narrative and the new media concept of interactivity. Manovich shares the preoccupation of his peer new media theorists with the storytelling potential of the computer based

digital database. In *Cybertext: Perspectives on Ergodic Literature* (1997), Aarseth theorises new media narrative as a new form of electronic literature which he terms “ergodic”, which means that the reader actively selects rather than responds to textual components in a process of a “work of physical construction that the various concepts of ‘reading’ do not account for” (1997:1). Murray's *Hamlet on the Holodeck* (1997) offers the possibility of a virtual experience on a *Star Wars* inspired “holodeck” - a narrative venue in cyberspace where the user interacts with computer generated characters in a computerized virtual environment. Here the person experiencing the production is said to have complete control or “agency” over the construction and consumption of his or her chosen narrative. Landow, in his *Hypertext 2.0: The Convergence of Critical Theory and Technology* (1994), theorises a new form of prose based hypertext narrative that is unending and user centred and which is clearly a radical theoretic departure from the narratives of traditional cinema and television. On the other hand virtual reality artists such as Jeffrey Shaw (2003) envisage future new media narrative as an immersive digital installation where the user “experiences” narrative by situating him or herself in a type of virtual panorama.

The new media theorists (Laurel, 1993; Davenport, 1996, 2004; Murray, 1997; Manovich, 2001; Ryan, 2004; Pledger and Shaw, 2004; Del Favero, Brown, Shaw, and Weibel, 2005) whose work is examined in this thesis all strongly agree that new theory must be devised if the narratives produced by new media storytellers are going to be satisfactorily explained. Writers such as Aarseth (2004: 361) and Ryan (2004: 2) make it very clear that the narrative and cinematic theories underpinning old media stories that made such great advances in the 20th Century are now seriously outdated.

It is the contention of this thesis that new media theorists are not justified in their dismissal of old media theory, and that a critique of new media theory shows that “old media” narrative and cinematic theory inevitably reasserts itself. A recontextualization of old media narrative and cinematic theory in the milieu of the digital environment will provide the key to answering the question facing new media storytellers like Megan

Heyward, as she searches for a way to tell a cinematic story in the emerging medium of computer based narrative:

One of the first things that I wished to see was whether or not it was possible to, number one create a story that still made sense, even if it was non-sequential and non-linear, to a greater or lesser degree. And whether or not it was possible to make something that was emotionally engaging in this form... I think new media is a unique opportunity, particularly at this time... For me it's a bit like when film cameras were developed a hundred years ago and people were wildly experimenting all over the world, with quite different styles, asking themselves "How the hell do you make a film, how do you convey a narrative in this new moving image form?"(Heyward, c2000: 1).

To answer this question one needs to consider all of the factors impacting upon narrative in new media. In the new media medium of lens-recorded, screen-based cinematic narrative primarily considered as a key exemplar in this thesis – that is in the work of Lev Manovich (2005) - the moving image is filmic, digital and computer driven. Therefore a theory that incorporates the old attributes of both narrative and cinematic storytelling, as well as the new digital nature of its data and articulation is a vital tool for new media storytellers.

The *Poetics of Mosaic Narrative* formulated in this thesis provides this tool. In its focus on the dramaturgical and cinematic foundations of new media material and the way in which new media computer-based production and distribution practices enable this material to be interacted with as an element of the storytelling process, rather than simple physical response to an action, it provides the answer to the question: "How do you convey an interactive narrative in this new moving image form?"

1.3 THESIS OVERVIEW

Chapter 2, "Towards a Poetics", canvasses the methodological factors involved in undertaking the development of a poetics. It validates the poetic approach in terms of its vital interest to both creators and producers of new media narrative as both a practical and theoretical tool. It builds on the poetic maps developed by Aristotle and the Russian Formalists of the 1920s. Certain key concepts including the Formalist notion of art, the

distinction between the story - the Formalist *fabula*; and the plot - the Formalist *syuzhet*; the creation of drama; and the importance of the parameters of form and style are canvassed and elaborated. These attributes are very much a feature of cinematic narrative as an “immersive” medium which affords the Aristotelian notion of dramatic engagement. This chapter also identifies the essential tension of this study between storytelling in “old” and “new” media by including a discussion of the nature of the digital text or new media object. It also outlines the forces that have challenged and interrogated traditional narrative during the Information Age. The potentially different storytelling attributes of the new media object are discussed in terms of the attributes of “old” media objects. In particular the notion of narrative and how it could be changed or “interacted” with is addressed.

Chapter 2 also overviews current new media research and seeks to locate the work of key theorists in terms of their treatment of the elements of cinematic narrative itself. In particular it situates and validates the importance of Manovich’s groundbreaking yet theoretically underdeveloped work on narrative as database, as the basis of this study. Manovich’s work is of vital importance for the discussion of the cinematic nature of new media narrative as he specifically endeavours to utilize film history and theory as a means of analysing new media (Manovich, 2001: 11) and in particular narrative. Unlike Landow (1992, 1994), Laurel (1993), Murray (1997), Aarseth (1997) and Shaw (2003), Manovich for the most part avoids speculative rhetoric regarding the future of new media. The games theorist, Marsha Kinder, notes that Manovich’s theory in *The Language of New Media* (2001) is “the most ambitious and rigorous book on this topic published” (Kinder, 2002: 120). The Director of Australia’s *iCinema* (Centre for Interactive Cinema Research), Jeffrey Shaw, states that Manovich’s *Language of New Media* “was a turning point in regard to articulating the actual processes of digital creation. With his book a coherent and revelatory interpretation of new media appeared” (Shaw in Manovich, 2005: 4). Moreover Manovich’s theoretic work is grounded and interrogated in his own artistic work (Manovich, 2005). For this reason Manovich’s theory and practice are used to illustrate, interrogate, and as a basis for, the development of key elements of a new media narrative poetics.

In order to develop the tools with which to construct a comprehensive poetics Chapter 3, “Narrative and New Media”, involves an exposition of the defining characteristics of narrative in new media. In Part I, “Contemporary New Media Narrative”, an overview of the current status of narrative in new media is presented. This involves a scrutiny of the fragmentary and temporal nature of narrative, the concept of the linearity and non-linearity and the narrative structures in interactive television, computer games and interactive drama. It also includes a scrutiny of the rendering of narrative space via the new media mode of the virtual and the old media modes of montage and mise-en-scene. In Part II, “Theorizing Narrative Form and Structure”, the defining elements of the creation and articulation of cinematic narrative in new media are elaborated by an overview of the key theories shaping cinematic narrative as known – the poetics of Aristotle, the poetics of the Russian Formalists and to a lesser extent the taxonomies of the French Structuralists. Additionally the Formalist rubric of “de-familiarization” is investigated to address the creation and functioning of a new media object as a work of art. The concepts contemplated also include both the old media and new media theoretical notions of the articulation of narrative as a language. The proposition is that these are the defining characteristics of cinematic narrative which underpin all cinematic narrative practice. Using these defining concepts as a measure it is possible to trace the attributes of dramaturgy and cinematic art and style – montage, mise-en-scene and cinematography that are evident in the outstanding cinema of our time. In turn it is argued that it is the recognition of the vital role that these attributes play in the creation of narrative that is lacking in the new media narrative exemplars considered from computer games and university media research labs. In Part III, the Formalist and Structuralist methodology used as the tool to investigate new media narrative and establish the *Poetics of Mosaic Narrative* is validated.

The development of the *Poetics of Mosaic Narrative* per se is enacted in Chapters 4 and 5 and tabulated in Chapter 6. Chapters 4 and 5 centre on an analysis of Manovich’s *Soft Cinema* (2005) as the practical basis for the construction of a working poetics of new

media narrative. These chapters draw together the elements singled out in the poetics and apply them in the practical context of the codification of database narrative as theorized by Manovich. Chapter 4 focuses on the nature of narrative as language that is articulated via the application of the principles of dramatic engagement - whether it be in a classic rising three act or a complex parallel narrative structure. Chapter 5 theorises the cinematic nature of narrative and investigates the role of montage as it contributes to both classical and avant-garde narrative as formal structures that may be applied to new media narrative.

In Chapter 6 the key elements of the *Poetics of Mosaic Narrative* are tabled. This table references the narrative and cinematic theories from which the poetics are developed and summarizes the structural and formal features of cinematic new media narrative. It also provides a guide to how the *Poetics of Mosaic Narrative* may be used as a framework for the telling of cinematic interactive non-linear stories in a digital medium.

Chapter 7 validates the metaphor of new media narrative as a mosaic in its encapsulation of the crucial relevance of the storytelling methodology of the old - narrative and cinema - as the basis of a new theory for a new medium.

CHAPTER 2: TOWARDS A POETICS OF NARRATIVE IN NEW MEDIA

2. Introduction

In their foreword to *New Screen Media: Cinema /Art /Narrative*, Martin Reiser and Andrea Zapp assert that in new media storytelling, “We are entering an age of narrative chaos, where traditional frameworks are being overthrown by emergent experimental and radical attempts to remaster the art of storytelling in developing technologies” (Reiser and Zapp, 2002: xxv). Reiser and Zapp argue that their text “gives long overdue recognition to the maturation of new media art into a major innovation in screen narrative form and genres” (Reiser and Zapp, 2002: xxv). Yet like many interested in the technological potential of new media to “re-invent” narrative in new modes of delivery (Landow 1992, 1997; Murray, 1997; Manovich, 2001; Shaw, 2005), they fail to underline the fact that even though the forms of narrative and the modes of narration may appear to be different, the principles underlying the articulation of cinematic narrative via the process of narration are still the major imperatives for the creation of new media storytelling as an art form.

The work of this thesis - the development of the *Poetics of Mosaic Narrative* - brings order to the chaos of experimentation that exemplifies contemporary new media storytelling - in effect it brings together the shattered pieces of the mosaic of theory, practice and research that characterizes emerging cinematic narrative in new media. A “mosaic” is a “work of art in which pictures are produced by joining together minute pieces of glass, stone, etc., of different colours”(*Concise Oxford Dictionary*, 1976). A “Mosaic Narrative” is metaphorically a narrative in which a story is told by combining fragments of narrative to create a narrative bound by time and artistic form. Just as the visual artist creates a mosaic from fragments of visual material, the Mosaic Narrative artist creates an electronic Mosaic Narrative. In the screen-based art form of Mosaic Narrative, due to the digital nature of New Media, the material form of the artwork is not fixed. The new media designer is able to build in the potential for either audience or computer interaction with narrative material to create an alternative “mosaic”. The term

mosaic is not new to literary or new media theory. For example the writer, Italo Calvino, refers to his interest in writing as “the whole mosaic in which man is set, the interplay of relationships, the design that emerges from the squiggles on the carpet” (Calvino, 1986: 34). The web browser program, Internet Explorer, was developed from the web browser, “Mosaic”, which was the first web browser to integrate images into what had previously been a text based web browsing experience (Butler, 2002: 41-42).

A Mosaic Narrative is much more than a simple search for and combination of pieces of story. Each piece is coloured by its potential contribution to the story. At each point at which one narrative fragment combines with another - the point of interaction - a number of factors come into play that inevitably affect the overall form of the story. These factors include the key elements of cinematic narrative - narrative causality and engagement, cinematic technique and style and the rendering of time and space. In creating the narrative mosaic one must consider each fragment both as a discrete entity and as part of a formal whole and then pose these questions in the placement of each piece: “What is its narrative purpose?” “Where and why does it ‘fit into’ the story as part of a chronology of cause and effect?” “What purpose does it serve in terms of the temporal and spatial creation of a fictional world?” “What is its dramatic purpose- how will the audience react to the action?” “What is its cinematic purpose - how do the visual elements and techniques of mise-en-scene, cinematography and montage contribute to the creation of story, style and form?” “In the final analysis why and how would anyone want to interact with these narratives?” There are no easy answers to these questions. It is apparent however that a concrete poetics would help ground these queries in a common vocabulary and field of concerns. This thesis charts such a framework by creating a fresh poetic picture, one that expands the relevancies of the old and incorporates the dynamics of the new with the aim of enhancing the creation of narrative in new media.

An analysis of this creation and delivery of new media storytelling as a means of entering the “digital expressive age” (Davenport, 2004: 162) requires a systematic approach to considering the elements governing the delivery of cinematic narrative in a digital environment such as that engendered in terms of a poetics of new media. In Part I of this

chapter, “The Poetic Methodology”, the notion of what constitutes a poetics, the conceptual framework for new media narrative, is demonstrated, explicated and justified. It draws on the long tradition of the poetics of fictional representation or “artistic imitation” (*Poetics*, Section 1, Part III: 2) first developed by Aristotle. This section establishes the essential paradigms of a “poetics” of cinematic narrative in new media and the “poetic” methodology by drawing from the key works of poetics pertinent to this emerging form. These include Aristotle’s poetics of dramatic poetry - *Poetics*; the Russian Formalists’ poetics of cinema - *Poetika Kino* (1927); the film theorist, David Bordwell’s Neo-Formalist poetics of cinema as expounded in *Film Art* (2001) and *Poetics of Cinema* (2008); and the new media theorist and practitioner Lev Manovich’s “poetics” of new media as presented in *The Language of New Media* (2001) The precepts of a poetics methodology and the establishment of the *Poetics of Mosaic Narrative* are discussed in terms of both Formalist and Structuralist film theory which in this thesis are the analytic “tools” used for the poetic investigation of narrative in new media. In particular, Aristotle’s *Poetics* is used to re-affirm the importance of the role of the dramatic in cinematic digital storytelling. Part II, “Narrative in the Digital Domain”, situates the concept of narrative and narrative theory in the new media debate as the basis for the consideration of cinematic storytelling in new media. The articulation of narrative in the new media environment is defined in terms of the Formalist concept of “fabula” and “syuzhet”. These theoretical concepts highlight the separation of narrative into content or data, and process or information access, and enable the examination of narrative in terms of the procedures involved as it is articulated in a digital environment. In particular Manovich’s concept of “database narrative” - the type of digital cinematic story that results from the selection of discrete elements of codified narrative material from a computer database and their subsequent articulation via the screen - as a cultural form and a form of information access to the computer, is canvassed as a key exemplar of new media narrative.

PART 1: THE POETIC METHODOLOGY

2.1 The Poetic Methodology

The notion of poetics in new media has been variously addressed. In *Computers as Theatre* (1993) Brenda Laurel draws upon Aristotle's *Poetics* to propose an overall theatrical framework for human-computer design. However her work does not deal with an actual design framework for new media storytelling. In *Digital Stories: the Poetics of Communication* (2000), Maia Engeli assumes that communication is a structural component of society but uses this concept to consider the discipline of building architecture in the digital narrative environment rather than narrative itself. Mateas (2002) attempts to create a poetics of interactive drama that incorporates a sense of "agency" or direct user experience as well as dramatic involvement but his work deals with computer generated rather than cinematic content and the focus is on the mechanics of plot rather than the cinematic. Overall none of these projects addresses the notion of poetics in the disciplined and all encompassing manner of Aristotle and the Russian Formalists. In particular none addresses storytelling in terms of the art of screen-based storytelling which it is contended in this thesis, is the essential factor under researched in the literature of new media narrative.

The term, *Poetics*, originates from Aristotle's study of dramatic poetry. The original term "poetics" is derived from the Greek word "poiesis", or "active making" and today covers a diversity of methodologies including, for example, narratology and semiology (Bordwell, 1989b: 2). As the film theorist Bordwell notes, "In some traditions, 'poetics' has referred only to the 'productive' side of the process" (Bordwell, 1989a; 269). In this thesis the notion of a poetics follows this tradition – the art form of new media narrative is analysed in terms of the "active making" or production of a fictional world. In doing so Aristotle's concerns regarding the use of the literary principles of mimetic representation are applied to the creation of new media narrative. In particular concerns relating to the potential impact of the digital medium on the cinematic mode of the representation of story in an interactive environment are addressed.

According to Aristotle (*Poetics*, Section 1, Part VIII: 7) and the tradition of poetics engendered by him, the crucial element in the organic creation of a poem, artwork or story, is the unity and harmony of design that ensures that every element is carefully structured and functions for a specific purpose integral to that object's overall aesthetic form and narrative function (*Poetics*, Section 1, Part VIII: 7). A perfect poem for Aristotle manifests perfect form – a term that for Aristotle is embodied in an overall plan or formula (*Poetics*, Section 1, Part VIII: 7). Therefore when a work is properly composed all of its components are subject to its overall design: “the structural union of parts being such that, if any one of them is displaced or removed, the whole will be disjointed and disturbed. For a thing whose presence or absence makes no visible difference, it is not an organic part of the whole” (*Poetics*, Section 1, Part VIII: 7). The holistic nature of the harmonic union of the discrete elements of an artwork is also the concern of Formalist theories of literature and film – a concern engendered in the work of the Russian Formalists and contemporary Neo-Formalists such as David Bordwell (1985, 1989, 1993; Bordwell, Staiger and Thompson, 1985). In film theory the term “Formalist” is used to refer to the work of both the original Russian Formalists and the contemporary work of the Neo-Formalists, David Bordwell and Kristin Thompson. Neo-Formalism as practised by Bordwell refers to his application and extension of Russian Formalist film theory as set out in *Poetika Kino* (1927). This is the focus of his work in texts such as *Narration and the Fiction Film* (1985) and *The Cinema of Eisenstein* (1993); his jointly authored work with Kristin Thompson, *The Classical Hollywood Cinema Film Style and Mode of Production* (1985) and their *Film Art* (2001) first published in 1979, and currently in its eighth edition. Bordwell has recently released a contemporary *Poetics of Cinema*, published in early 2008. Thompson's Neo-Formalist work includes *Ivan the Terrible: A Neo-Formalist Analysis* (1980) and *Breaking the Glass Armour* (1988).

Applying the notion of a poetics in the Aristotelian tradition seeks to analyse how the processes of new media narrative articulate the content of that narrative. A poetic methodology posits that the elements, overall patterns and structures and their combination and articulation in an artwork are revealed as a complementary and complex

entity that is carefully orchestrated by the artist. Aristotle delineates this task in the *Poetics*. As the narrative film theorist Seymour Chatman (1978) notes, Aristotle's original methodology in the *Poetics* first makes the distinction between the "what" and the "how" of poetry. Aristotle describes the components as being: "the imitation of actions in the real world, *praxis*, ... seen as forming an argument, *logos*, from which were selected the units that formed the plot, *mythos*" (Chatman, 1978: 19).

In *Poetika Kino* (1927) the Russian Formalist theorists also made the distinction between the "what" and "how" of narrative – the content and the form - in their study, first of literature, then of cinema. Rather than focussing on the content and its representational or communicative dimension, the Formalists generally focussed on the formal properties of a text – its expressive, systematic and literary elements. For the Formalists the methodology of the construction of a formal poetics entailed "the creation of a scientific poetics (which) must begin inductively with a hypothesis built upon an accumulation of evidence. The hypothesis is that poetic and prosaic languages exist, that the laws which distinguish them exist, and, finally that these differences are to be analysed" (Victor Shklovsky, "Potebyna" *Poetika* (1919) in Eichenbaum (1926: 114). (Here Eichenbaum quotes from the Russian original of Shklovsky's article on "Potebyna" from *Poetika* [1919] currently not available in English). This distinction between "prosaic" and "poetic" language is the starting point of the analysis of the features and functioning of language for both the Russian Formalists and for Aristotle.

The narrative theorist, Herman (1993, discusses the relevance of the application of poetics to the emerging form of new media storytelling. In his discussion of narratology and contemporary narrative, Herman notes that classical poetics from the time of Aristotle is the generic name for the strategies involved in the attempts to describe and classify the techniques of fictional or mimetic representation:

Poetics has tried to reduce dynamic processes to synchronic wholes, to neutralize time itself. Events happen to characters in narrative, but the reader is invited to view the work as an entirety, spatialized, so that overall patterns are visible...Classical approaches ...view narratives as structures more or less successfully realized by the storyteller (Hermann, 1999: 23-24).

Herman points out a number of key attributes of the classical poetic approach to narrative that are of importance to a study of narrative in the new media environment. In particular is the Formalist concept of the “synchronic whole”. This is the notion of a story as a complete and interdependent patterning and articulation of the elements of narrative as crafted by a storyteller. This is the focus that sets this thesis apart from other theses on new media storytelling which concentrate on either the software generation of story (Brooks, 1996; Mateas, 2002) or the “reading’ of new media narrative once it has been completed (Ball, 2005).

The Neo-Formalist film theorist David Bordwell’s historically based Formalist methodology also follows the approach taken by Aristotle, as noted earlier making a distinction between the “what” and the “how” of narrative. Bordwell proposes that the “how” of storytelling - “the questions of composition, function, and effect that interpretative criticism sets out to answer are most directly addressed and best answered by a self conscious historical poetics of cinema” (Bordwell, 1989a: 267). Bordwell conceives historical poetics as “the study of how, in determinate circumstances, films are put together, serve specific functions, and achieve specific effects” (Bordwell, 1989a: 267). Additionally he notes that this tradition has been developed by those whose work is also referenced in this thesis - the “classical aestheticians of cinema: Arnheim, the Russian Formalists, the Soviet filmmakers (and) Bazin...” (Bordwell, 1989a: 267). For Bordwell:

The poetics of any medium studies the finished work as the result of a process of construction – a process which includes a craft component (eg rules of thumb), the more general principles according to which the work is composed, and its functions, effects and uses. Any inquiry into the fundamental principles by which a work in any representational medium is constructed can fall within the domain of poetics (Bordwell, 1989b: 2).

Therefore reflecting upon new media narrative in Bordwell’s Neo-Formalist poetic terms leads to an inquiry into the fundamental principles of the construction of a new media narrative. This may be considered by posing three broad questions addressed by this thesis.

- 1. By what structural and formal principles are new media narratives created as distinctive wholes or overarching forms?**
- 2. How are the properties of the cinematic medium - visual storytelling and style - deployed in the genre of new media narrative?**
- 3. How do the form, structure and style of new media narrative impact upon the way designers of narrative anticipate the audience's engagement with narrative?**

2.2 Why A Poetics? A Validation

In the cinematic domain the study of the conventions and functions of screen-based storytelling has been addressed in varying degrees by theorists of different theoretical persuasions. These including those influenced by, for example, Realism (Bazin, 1967), Feminism (Mulvey, 1975), Narratology (Chatman, 1978), Semiology and Structuralism (Metz, 1974) and psychoanalysis (Metz, 1975, Heath, 1981). However for the most part these theories consider film from what may be considered a “de-constructive” as opposed to “constructive” approach. These theorists isolate aspects of film post creation - whether they are, for example, gender representation in the case of Feminism, or the representation of cultural meanings and relations of power in the case of Cultural Studies. It is generally the modus operandi of the film theorist to discuss aspects of cinematic theory after the film has been created and screened. However as the dramatic theorist, Sam Smiley notes, “Every author, in some manner or another, must handle three phases of poetic composition: invention, planning and expression” (Smiley, 1971: 296). These aspects of the study of new media narrative, “the phases of poetic composition: invention, planning and expression” and how to go about them using the tools of a poetics, are the concerns of this thesis.

As an illustration of the theoretical approach which considers film “post creation” as opposed to the approach of poetics which may apply to film “pre-creation”, one may compare Poetics with Semiotics. It must be noted that there is a very fine line to be drawn regarding the difference between Poetics and Semiotics. Both disciplines are concerned with the structures and systems of a work and both disciplines can embrace, for example,

the methodology of narratology. Overall both Poetics and Semiotics deal with the codes of a text and the “fundamental principles” of how a work creates meaning in a representational setting. However the key difference is that Poetics may apply to the craft decisions that are made by the creator of the work – what Bordwell in his generally non-semiotic work (Stam, 1992: 11) deems the “craft component” (Bordwell, 1989b: 2) - while Semiotics deals with the decisions that can be made about the codes, systems and meaning of the work once it has been constructed.

In this thesis theoretical approaches such as Semiotics and Psychoanalysis are rejected in favour of the construction of a poetics for three main reasons. Firstly the focus of research is the emergence of a new form of narrative and if this new form is to exist it must be created. Therefore there is a need for tools and concepts to discuss how it may be, is being, and has been created. Secondly in strictly academic and theoretic terms, it is only in Aristotle and the Russian Formalists’ poetics that is found this notion of creation. In Aristotle’s case it is the creation of the fictional art form of poetry and the tenets he lay down for the construction of this form. Likewise it is the case for the Russian Formalists and their poetics of cinema in *Poetika Kino* (1927). It must also be noted that the Russian Formalists specifically recognize the importance of the intention of the artist as a key aspect of film theory. Eichenbaum (1927) coins the concept of “inner speech” as the terminology for the manifestation of the director’s ability to construct and link the structures and meaning of a film in such a way so as to elicit his or her desired effect on the audience (Eichenbaum, 1927: 62). Thirdly it is in the singular cinematic theories of Formalism and Neo-Formalism (and the craft based Hollywood screen writing scenario manuals of, for example, McKee [1998] and Aronson [2000a]) that is found a contemporary development of the Aristotelian tradition of considering a fictional art form in terms of its overall form, structure and style. These assertions are based on the premise that the creation of the cinematic art form is the deliberate construct of an artist – the writer and then director - who makes informed choices about how he or she will use the elements of his or her art form to tell a cinematic story. As Bordwell asserts:

Poetics is thus not another critical approach, like myth criticism or deconstruction. Nor is it a “theory” like psychoanalysis or Marxism. In its broadest compass, it is a conceptual framework within which

particular questions about film's composition and effects can be posed. In its accomplishments, poetics has proven too wide-ranging to constitute practical criticism and too concrete (too practical) to be honoured as theory. Yet it is crucial to both. Its empirical generalisations and conceptual distinctions supply assumptions, hypotheses, and enthymematic premises that neither criticism nor theory could do without. Analytical editing, the notion of the protagonist, character-centred causality, the long take, on-screen versus off-screen space, the concept of the scene, crosscutting, and diegetic sound are middle level concepts which survive changes in theoretical fashion because they mesh tightly with the phenomena. They are our primary analytic instruments, and their usefulness lies in the fact that they capture real and significant choices faced by filmmakers and viewers (Bordwell, 1989a: 273).

Bordwell contends that in cinematic storytelling the decisions that the craftsmen must make involve decisions about script, but they also involve decisions pertaining to the cinematic nature of film as an art form – a form described in a “poetics”. In film these include the elements of film style - mise-en-scene, cinematography, lighting, editing and montage – acknowledged by the Russian Formalists (1927) in *Poetika Kino* as being essential to the art of cinema. In terms of the poetic methodology, Aristotle's *Poetics* sets forth the parameters that a work needed to address to be classified as poetry – these are the decisions that a poet must make to adhere to the blueprint of the poetic form. In short these are the “poetic” decisions that have not been adequately addressed in a systematic manner in new media narrative theory.

2.3 Theorizing New Media Narrative

The essential debates in the emerging genres of storytelling in new media centre upon the opportunities and challenges that new media offer to the future of cinematic forms of narrative, particularly the opportunity for interactivity. These deliberations reflect upon the relevance of classical film and drama theory and notions of non-linearity and interactivity. On the one hand critics like Cubitt question the place of traditional narrative theory: “narrative analysis produces a static and spatial model in place of a dynamic and temporal one. Is it possible or desirable for narrative to regain a place in the critical and practical vocabulary of the emergent media? I believe so, but under a new guise...”

(Cubitt 2002: 6). But others like Willemen dismiss any thought that new media has brought change to narrative:

There is no need to dwell on silly notions such as the digital media's alleged development of some form of non-linear narrative: narrative constantly loops back and branches out, condenses and proliferates uncontrollably... Narrative never was linear, so to proclaim the discovery of non-linear narrative is absurd. In the same vein, interactivity has always been a feature of any representational media, from religious rituals to painting, novels and cinema (Willemen, 2002: 14).

Both Cubitt and Willemen make valid points. On the one hand it must be acknowledged that narrative theory – the study of the structures and processes of storytelling - falls short as a model for the dynamic digital medium but it must also be noted that to date, cinematic narrative theory has not figured largely in this debate (Brown, Del Favero, Shaw, and Weibel, 2003: 5). On the other hand it is true that conceptions of narrative have always engendered concepts of linearity, non-linearity and interaction and that in the new media environment there is the potential for these attributes to be physically “changed”.

This thesis is not alone in the assertion that narrative theory has remained underdeveloped in new media research. For example, researchers from Australia's *iCinema* (Centre for Interactive Cinema Research) also acknowledge that the treatment of narrative in new media has languished due to a fascination with the technical and the experiences it can make available. Brown, Del Favero, Shaw and Weibel (2003) argue that although crucial to the artistic expansion of, for example, the storytelling mode of digital cinema, the narrative potential of digital media has been overlooked at the expense of a concern with virtual simulation (Brown et al., 2003: 1-4). Del Favero, Brown, Shaw and Weibel (2005) also assert “It is limitations in the understanding of narrative, as opposed to technical understanding, which have restricted the aesthetic development of new media and digital cinema in terms of interactive narrative” (Del Favero et al., 2005: 1).

It is the assertion of this thesis that rather than the search for new forms of storytelling via the explorations of the limits of interactivity, non-linearity or virtual immersion that

currently monopolise the research agenda, it is more appropriate to consider the vital elements of the art of cinematic storytelling. In this way the paradigms of art and technology may be more successfully aligned and Aristotle's "good" (*Poetics*, Section 1, Part 1: 1) stories may be told. The key elements of the art of storytelling that are essential to successful storytelling in any medium must re-visit the central paradigms of narrative – the creation of causality, the rendering of time and space and the engendering of engagement and catharsis through aesthetic, emotional and intellectual engagement – in short the dramaturgical and cinematic parameters of narrative as embodied in the *Poetics of Mosaic Narrative*.

2.4 The Poetic Purpose and *The Language of New Media* (2001)

In the original *Poetics* Aristotle devised a conceptual framework upon which may be based the creation of a new media narrative poetics. Aristotle investigated the various kinds of poetry including comic, tragic and epic poetry and set out to note "the essential quality of each (type of poetry), to inquire into the structure of the plot as requisite of a good poem; into the number and nature of the parts of which a poem is composed; and similarly into whatever else falls within the same inquiry" (*Poetics*, Section 1: Part I: 1). Likewise, the Russian Formalists were concerned with the study first of poetic language, then of cinema as a mimetic form. The leading Russian Formalist, Eichenbaum, emphasises in particular the poetic as well as functional focus of creating a "poetics" of a work which "must explain its literary function" (Eichenbaum, 1926: 117).

In *The Language of New Media*, it is asserted that in the Formalist tradition, Manovich calls for a theoretical analysis of new media storytelling, even though his methodology is too broad ranging to be classified as a genuine "poetics". However Manovich's is the key new media text that discusses the language of new media in poetic terms. While Manovich himself resists the term, his denial that his work takes the approach of poetics ironically highlights the very features of his book that make it eminently appropriate as the foundation for a poetics of new media:

In putting the word language into the title of the book, I do not want to suggest that we need to return to the structuralist phase of semiotics in understanding new media. However, given most studies of new media and cyberculture focus on their sociological, economic, and political dimensions, it is important to me to use the word *language* to signal the different focus of this work: the emergent conventions, recurrent design patterns, and key forms of new media. I considered using the words *aesthetics* and *poetics* instead of language, eventually deciding against them. *Aesthetics* implies a set of oppositions I would like to avoid – between art and mass culture, the beautiful and the ugly, the valuable and unimportant. *Poetics* also bears undesirable connotations. Continuing the project of the Russian Formalists of the 1910's, theoreticians of the 1960s defined poetics as the study of specific properties of particular arts, such as narrative literature (Manovich, 2001: 12). (Emphasis Manovich's own).

Manovich goes on to dismiss the notion of a poetics as being too “abstract” and “internal,” citing the literary scholar Tzvetan Todorov in his *Introduction to Poetics* (1968) in support of this assertion. Manovich quotes Todorov thus: “In contradistinction to the interpretation of particular works, it (poetics) does seek to name meaning, but aims at a knowledge of the general laws that preside over the birth of each work. But in contradistinction to such sciences as psychology, sociology, etc., it seeks these laws within literature itself. Poetics is therefore an approach to literature at once ‘abstract’ and ‘internal’” (Todorov, 1981:6 quoted in Manovich, 2001: 12 -13). Manovich continues this idea saying “In contrast to such an internal approach, I neither claim that the conventions, elements, and forms are unique, nor do I consider it useful to look at them in isolation” (Manovich, 2001: 13). However, a close examination of what Todorov says in the quoted instance sees the application of the tradition of Aristotelian poetics – the knowledge of the “general laws” or conventions of the creation or “birth” of a work. As Todorov notes in the poetic tradition, this divorces a work from the theoretical processes of interpretation of meaning, or in the sociological or psychological tradition, of a conceptualisation of meaning by considering factors “outside” the work (here one could cite for example interpretations based on gender, power structures or Freudian psychology).

As Manovich and Todorov both observe, poetics considers a work in terms of the laws of its own creation. However Manovich is in error to suggest that the approach he is taking in *The Language of New Media* is not in the tradition of a poetics because he wishes to situate the conventions, elements and forms of new media in terms of visual language, computer technology, contemporary visual culture and contemporary information culture. Both the Russian Formalists and the Neo-Formalist, David Bordwell are at pains to situate their “poetic” work in the context of other cultural forms that influence the laws of cinema. The work of the Russian Formalists grew out of their work on literature. David Bordwell in his research, for example, in *The Classical Hollywood Cinema Film Style and Production* (1985) and *Film Art* (2001) takes care to explain the poetics of Classical Hollywood cinema in terms of the conventions of cinema (for example the practice of continuity editing) that have arisen as a result of the culture of the studio system.

In validating his approach in using the word “language” in the title of his text, Manovich brings to the fore a number of key issues from which a genuine poetics may be constructed. In his assertion that most studies of new media and cyberculture focus on their sociological, economic and political dimensions, he divines the need for a work that focuses on “emergent conventions, recurrent design patterns, and key forms of new media” (Manovich, 2001: 13); indeed he points to the very foundations of Formalist poetics - as Manovich himself asserts: “the general laws” of the creation of a work.

Whilst Manovich may see an attempt to formulate these laws as abstract and internal, this was never the intention of the Russian Formalists in their *Poetika Kino* (1927). In his early defence of the Formal method, Eichenbaum dismissed accusations that Formalism was a fixed, inflexible theory contending instead that:

We value a theory only as a working hypothesis to help us discover and interpret facts and use them as the material for our research. We are not concerned with definitions... nor do we build general theories... We posit specific principles and adhere to them insofar as the material justifies them... Neither ‘Formalism’ as an aesthetic theory nor ‘methodology’ characterizes us; we are characterized only by the attempt to create an independent science of literature which studies specifically literary material. We ask only for recognition of

the theoretical and historic facts of literary art as such (Eichenbaum, 1926: 103).

Eichenbaum's "The Theory of the Formal Method" (1926) gives an overview of the Russian Formalist's work. This essay was written in defence and validation of the Formalist's methodology against Marxist attacks regarding Formalism's perceived technical focus and concentration on "art for art's sake" rather than the "social causes and effects" of art (Lemon and Reis, 1965: 99- 100). In justification of their approach to the study of the "art" of literature and then film, the Formalists dissociated themselves from "the traditional idea of form as an envelope, a vessel into which one pours a liquid (the content). The facts of art demonstrate that art's uniqueness consists not in the 'parts' which enter into it but in their original *use*. Thus the notion of form was changed ... We had to show that the perception of form results from special artistic techniques which force the reader to experience the form" (Eichenbaum, 1926: 112 - 113). In confirming the theory of the formal method, Eichenbaum offers the most concise and user-friendly notion of what Formalism constitutes as a methodology for the formulation of a poetics:

Concerning form, the Formalists thought it important to change the meaning of this muddled term. It was important to destroy these traditional correlatives and so to enrich the idea of form with new significance. *The notion of "technique", because it has to do directly with the distinguishing features of poetic and practical speech, is much more significant in the long-range evolution of formalism that [sic] is the notion of "form"* (Eichenbaum, 1926: 115) (Emphasis Eichenbaum's own).

Eichenbaum alludes to the origin of the term "Formalism" in distancing the Formalists from previous literary Russian scholars. "The old scholarship worked exclusively with the material, taking it as the 'content' and treating the remainder as the external form either totally without interest or of interest only to the dilettante" (Eichenbaum, 1926: 119). "Their generally accepted view saw an opposition between form and content... Our view gave form the significance of a thing complete in itself and strengthened it by considering the work of art in relation to its purpose" (Eichenbaum, 1926: 130). According to Eichenbaum, purpose in Formalist terms is the function of a particular device in a specific work:

The original attempt of the Formalists to take a particular structural device and to establish its identity in diverse materials became an attempt to differentiate, to understand, the *function* of a device in each given case (Eichenbaum, 1926: 132). (Emphasis Eichenbaum's own).

The Formalists saw form and content as distinctly different yet interdependent components of a work. This precept is best understood as Eichenbaum (1926: 116) illustrates, in terms of Shklovsky's discussion of the concept of "The Relation of Devices of Plot Construction to General Devices of Style" (1919) (No English translation available) and the concept of "motivation" as presented in his stylistic commentary of the Sterne novel *Tristram Shandy* (Shklovsky, 1921). In his discussion of *Tristram Shandy*, Shklovsky shows that there are innumerable ways of making a story into a plot. In the process all involve some form of "disarrangement" of what could be called the real-life sequence of events (Shklovsky, 1921: 28-57). Thus for the Formalists form and content were integral parts of the whole work – without form or what one could term structure constructed as a result of plot motivation, content is perceived to be an arbitrary construct.

It is observed that although Manovich rejects the concept of a poetics because it is too "internal" he is in fact using the methodology of poetics in its Formalist and Structuralist mode to analyse the conventions and forms of new media. Manovich claims that in contrast to the traditional conception of poetics as outlined above, he aims to consider new media in relation to other areas of culture, both contemporary and historic, including art and media - their "visual languages and their strategies for organising information and structuring the user's experience"; computer technology and contemporary visual and information culture (Manovich, 2001: 13). In the final analysis it is in his rejection of the notion of a poetics that Manovich leaves his own research open to a lack of detailed and systematic analysis.

Instead Manovich's development of a "language" of new media is often unruly, eclectic, repetitive or contradictory. He covers a multitude of areas from the spectacle of, and audience reactions to early cinema, to modern notions of "teleaction" and "telepresence" as developed in the military arena (Manovich, 2001: 164-167). In this

instance in particular Manovich seems to divert on a tangent, attaching the sinister shadow of an omnipresent Orwellian Big Brother to these new forms of audience involvement with media material. Indeed a covert political commentary underlines much of his work at the expense of a scientific evaluation of the material to hand. On other occasions, for example, in the last chapter, “What is Digital Cinema?”, it almost seems as though the material belongs elsewhere as it neither logically develops, nor consolidates earlier assertions. In the context of *The Language of New Media*, this chapter’s thrust or argument for digital cinema and the digital image as the basis of a new type of cinema that has its antecedents in the lost identity of early animation, is at odds with Manovich’s overall thesis or search for the conventions of new media. Indeed this chapter and sections of a number of other chapters have been independently published elsewhere by Manovich (2001: xxxviii-xxxix). However, despite these observations of the often divergent and contradictory nature of his thesis, Manovich’s *Language of New Media* is unique, challenging, innovative and groundbreaking in the sheer expanse of material it covers and the original insights into new media art and narrative that it makes.

In the final analysis, Manovich is the key new media theorist to ostensibly set out to consider in detail the cinematic nature of new media storytelling. Additionally Manovich, who is an academic, artist, commercial designer, animator and programmer, considers his theory of new media in terms of both the art and technology of new media. Using these parameters, Manovich applies his studies in film theory, art history, literary theory and computer programming to a discussion of the principles, conventions and forms or “language” of new media based on a scrutiny of the new media “object”. In *The Language of New Media*, it must be noted that Manovich uses the term, “object”, to encompass new media creations – the “product, artwork, interactive media....” (Manovich, 2001: 14). He also uses this term to engender its intertextual references with the term “object” as used in computer programming languages and interestingly, the term “object” as used by the Russian avant-garde artists of the 1920s who referred to their creations as “objects” rather than works of art. For example, Eichenbaum insisted on the scientific yet non-methodological focus of Formalist work by stating that “The

essence of our work consisted not in some kind of static “formal method”, but in a study of the specific peculiarities of verbal art – we were not advocates of a method, but students of an *object*” (Eichenbaum, 1926: 131) (Emphasis added).

Although Manovich resists the comparison, as was the case for the Russian Formalists for whom the cinema represented “a theoretical laboratory” (Eagle, 1981: 2) of an emerging art form, similarly for Manovich the term, *object*, is also used to capture the concept of laboratory experimentation and the importance he places on “systematic, laboratory-like research into its (new media’s) elements, and basic compositional, expressive and generative strategies” (Manovich, 2001:15) that he attempts to emulate in *The Language of New Media*. Ultimately Manovich’s theory is designed to help users describe the technical and technological aspects of new media, that is how the elements and conventions in an object function to provide the audience or user with the potential for a meaningful engagement.

In an effort to ground the elements and conventions of his theory, Manovich historically contextualizes the language of new media in terms of modern visual and media cultures. Unlike other key theorists Laurel (1993), Murray (1997), Davenport (1996) and Aarseth (1997), Manovich considers the means by which new media draw from older visual cultural forms and languages and the ways in which they unique and depart from them. Manovich specifically aligns the history of computing with the history of cinema. For example, he equates the computer’s origins as a machine for recording and computing numerical data with the film projector’s origins as a machine for recording and retrieving visual data (Manovich, 2001; 22- 26). Throughout *The Language of New Media* Manovich parallels the technological and aesthetic developments and conventions in the use of the icons of cinematic communication – the image, the screen, composition or mise-en-scene, montage and narrative with their use in new media. Manovich considers the techniques of representation and simulation in “all” new media forms including cinema, computer games, digital art and installations, digital video, virtual reality (VR), the Internet and computer games. Essentially Manovich uses the analogy of “old media” and cinema to legitimise the conventions of new media. For

almost every process in new media he isolates a similar process in old media. For example, he compares the creation of digital special effects with the hand coloration of silent film (Manovich, 2001: 132), or the selection process of computer code and the database with the “show and selection” process of the magic lantern (Manovich, 2001: 130). In his historical analysis of the interrelationship between new media and cinematic cultural practices he considers that he addresses the following questions:

How does the shift to computer-based media redefine the nature of static and moving images? What is the effect of computerisation on the visual languages used by our culture? What new aesthetic possibilities become available to us? (Manovich, 2001: 9).

It is this purported focus on visual language and aesthetics which marks Manovich’s theory as of particular relevance to this thesis. For Manovich in *The Language of New Media*, it is the new media image and how it is mediated through, for example, the camera and interacted with via the frame, that is one of the most important considerations of storytelling in new media. For example, in the prologue to *The Language of New Media*, Manovich aligns today’s new media image as recorded by the camera with Dziga Vertov’s kino eye in an attempt to convey a sense of the visual or cinematic nature of the digitally produced new media image (Manovich, 2001: xxvii).

Manovich’s text is the key exemplar of the work of a new media theorist who has utilized film history and theory as a means of analysing new media (Manovich, 2001: 11) and in particular narrative. Moreover Manovich is an acclaimed new media artist whose theory and practice are integral to his research. His work in the new media *Little Movies*, (1994- 1997) and more recently *Soft Cinema* (2005) not only puts into practice his theory of database narrative but also seeks to explore the paradigms of cinematic storytelling.

However despite his deliberate intention to focus on cinematic history and theory in the *Language of New Media*, overall Manovich’s attempts to ground the emergence of new forms of computer based storytelling in their cinematic ancestry fall short. His work suffers from a lack of depth in his analysis of two of the key features of new media

narrative – the structures and forms of new media story content. Manovich focuses on the aspects of new media narrative influenced by the continually evolving machinery of new media storytelling - the graphical, virtual and computational aspects of hosting and generating the new media image and story information, rather than the cinematic, dramatic and narratological implications of new media storytelling. Additionally although Manovich repeatedly acknowledges the role of the designer in creating new media content, he fails to address how the designer constructs this new media art form.

To consider the analysis of new media narrative “objects” in terms of a poetics, it is possible to extrapolate or build upon what Manovich himself has started to address. This is facilitated by employing a Formalist methodology which considers the conventions and functions of a new media object in terms of the part they play in the unity and harmony of design and function that makes the work an organic whole.

PART 11 – NARRATIVE IN THE DIGITAL DOMAIN

2.5 New Media Storytelling - A Snapshot

Narrative has always played a significant role in human life. Whether it be for the purpose of entertainment, for information or for persuasion, narrative serves as a way of thinking about, escaping from or highlighting the experiences of the known and unknown.

In everyday life we make choices in light of the way, or ways, we believe the world may become. Narrative is one powerful framework that poses the connection of objects in time. It allows us to make cause and affect pairs, to connect pairs with other pairs, to construct a linked set of events. One of the purposes of narrative is to demonstrate how certain effects that are desired may be achieved, how desire is linked to possibilities for being, how events may proceed. In this way, narrative operates to draw the future into the present (Branigan, 1992: 217).

The role of narrative as a framework for human experience or as a “cultural form” has not changed in modern computer culture. In *The Language of New Media* (2001), Manovich asserts that a “cultural form” is a general way “used by culture to represent

human experience, the world, and human existence in this world” (Manovich, 2001: 215). Manovich aligns this new “cultural form” with narrative. Manovich notes in particular that in the modern age narrative is “the key form of cultural expression”, a scenario brought about first by the novel and then by cinema (Manovich, 2001: 218). He proposes that in the computer age, “information access” - “a key activity of the computer age” is “no longer just a key form of work but also a new category of culture” (Manovich, 2001: 217). On the one hand it would seem for Manovich that information access as activated in the functioning of a computer and as a discrete cultural activity has replaced narrative. On the other hand Manovich notes the paucity of systematic access to and delivery of this cultural material to the audience. “If traditional cultures provided people with well defined narratives (myths, religion) and little “stand alone” information, today we have too much information and too few narratives that can tie it together” (Manovich, 2001: 217).

It is Manovich’s conception of information access and its links with narrative as a cultural form that leads him to discuss a theory of this form of narrative in new media. Manovich notes that in *The Language of New Media* he is addressing the need to develop a theory of this cultural form - “*a theoretical analysis of the aesthetics of information access as well as the creation of new media objects that “aestheticize” information processing*” (Manovich, 2001: 217) (Italics Manovich’s own).

Manovich also addresses the concept of narrative as the essential “driver” of storytelling in new media – a concept of narrative has been commonly invoked by new media theorists (Landow, 1994; Murray, 1997; Aarseth, 1997; Mateas, 2001). However the storytelling power of the computer as advocated by these theorists has often relied on shallow conceptions of the features of narrative and how these are changed in the digital environment. Two conceptions that have dominated this theorization are the notion that the branching and interactive digital text contains an infinite number of electronically linked stories (Landow, 1997: 3) and the conception of the “holodeck” as a virtual digital environment in which the user becomes a character who becomes involved in the plot (Murray, 1997: 30). Manovich (2001) himself addresses these ideas to varying degrees.

Moreover in his concept of narrative as database he starts to reconcile the issue of the inherent linearity of narrative and the temporal and spatial dimensions of its delivery with the multiple paths of narrative material made possible by the interactive nature of the digital text. In using narrative theory to consider both the database and 3-D navigable space as the key forms of new media information access as the answer to the problem of human access to information - or storytelling - in the information age, as noted above, Manovich's research is unique.

2.6 What is narrative? – Narrative Theory

The defining features of classic narrative structure typically engender the Aristotelian concept of action or movement from one state of affairs to another (*Poetics*, Section 1, Part 1: VI-VII: 4-6). As the film theorist Cook (1985) so succinctly notes, these features include a notion of “the linearity of cause and effect within an overall trajectory of enigma-resolution”, “a fictional world governed by spatial and temporal verisimilitude” and “a centrality of the narrative agency of psychologically-rounded characters” (Cook, 1985: 216).

The linear conception of narrative – as a chain or a sequence or a series - appears to dominate the theoretical definitions. For example, the film theorist Kristin Thompson states: “In any medium, a narrative can be thought of as a chain of events occurring in time and space and linked by cause and effect” (Thompson, 1999: 10). Hartley defines narrative as “the devices, strategies and conventions governing the organization of a story (fictional or factual) into sequence” (Hartley, 1994: 194 in O’Sullivan, Hartley et al.). In *The Language of New Media* Manovich appropriates the literary theorist, Mieke Bal’s (1985: 8) definition of narrative to list the criteria a “cultural object” must meet to be a narrative, rather than how these elements are actualised in the process of storytelling. Citing Bal, Manovich notes that narrative “should contain both an actor and a narrator: it should also contain three distinct levels consisting of the text, the story, and the fabula; and its ‘contents’ should be ‘a series of connected events caused or experienced by an actor’” (Manovich, 2001: 227).

Each of these definitions although plausible, neglects to consider what happens in the articulation of narrative and hence the processes that need to be considered when one links these elements in the chain, the series or the sequence. Additionally none of these definitions addresses the shaping power of the mode of articulation – in this instance the cinematic mode.

The film theorist David Bordwell offers a more productive definition of narrative distinguishing between the “what” and “how” of storytelling – the “fabula” and the “syuzhet” as first theorised by the Russian Formalists (Bordwell, 1985: 49-50). In the Formalist sense the fabula is “the imaginary sequence of events narrated by the syuzhet, which provides the actual narrative pattern of the work, or the story-as-told” (Bordwell, 1985: 49-50). Like Thompson and Hartley, Bordwell contends, “The fabula embodies the action as a chronological, cause-and-effect chain of events occurring within a given duration and a spatial field” (Bordwell, 1985: 49). However Bordwell builds on this to consider the role of the syuzhet - “the actual arrangement and presentation of the fabula in the film” (Bordwell, 1985: 50).

Of particular relevance to this thesis with its contemplation of the structured and procedurally coded nature of cinematic computer based interactive storytelling, is the fact that Bordwell also discusses the possibility of studying narrative as a structure, “ a particular way of combining parts to make a whole” (Bordwell, 1985: xi). He also considers the possibility of studying narrative as a process he terms “narration” - “the activity of selecting, arranging, and rendering story material in order to achieve specific time-bound effects on a perceiver”(Bordwell, 1985: xi). Bordwell notes that the syuzhet “is a more abstract construct, the patterning of the story as a blow-by-blow recounting of the film could render it. The syuzhet is a system because it arranges components – the story events and states of affairs – according to specific principles ” (Bordwell, 1985: 50). Fabula or story is then the imaginary construction created by the audience as they interpret the narrative and stylistic cues of the film as it unfolds. As Bordwell notes the fabula is never a concrete construction, but is a cognitive construct developed by the

audience progressively and retrospectively: “the viewer builds the fabula on the basis of prototype schemata (identifiable types of persons, actions, locales, etc), template schemata (principally the “canonic” story), and procedural schemata (a search for appropriate motivations and relations of causality, time and space)” (Bordwell, 1985: 49).

The most important and original aspect of Bordwell’s conception of the syuzhet relevant to this thesis is his insistence on the syuzhet as a system that arranges its components according to specific principles. The distinction Bordwell makes between the content of narrative and the process of narration is a valuable starting point for a working definition of narrative in new media. Bordwell’s conceptualisation of the role of the “plot” or syuzhet in the articulation of the “story” or fabula is essential to the study of narrative in new media. This is because the key factor affecting the nature of narrative in new media is the way that the medium of the digital computer affects the process of narration, in particular during this process the way in which audience engagement and potential “interaction” via, or as a result of, the dramatic processes of storytelling may be created.

2. 7 Dramatic Narration – the Aristotelian Model

In order to appreciate the significance of the fabula and the syuzhet and to conceive of narrative as more than the static model of literary and film theory but rather as a dramatic process that engages an audience, it is helpful to turn to Aristotle’s *Poetics* which have informed dramatic and screenwriting theory over the centuries. In the *Poetics* Aristotle lays down the concepts of plot, character, causality and theme and provides a definition of tragedy which together have become the bedrock of literary and dramatic theory (Shakespeare C1600; Forster, 1955; Egri, 1946; Smiley, 1971); cinematic scriptwriting theory (McKee, 1998; Aronson, 2000; Seger, 1994; Field, 1994); and emerging contemporary new media theory (Laurel, 1993; Mateas, 2001). In his definition of tragedy Aristotle emphasizes a structure of plot which is regarded as the classic three act - beginning, middle and end – or Aristotelian structure of storytelling (Egri, 1946; Smiley, 1971; McKee, 1998; Aronson, 2000; Seger, 1994; Field, 1994). Aristotle states:

Tragedy is an imitation of an action that is complete, and whole, and of a certain magnitude; for there may be a whole that is wanting in magnitude. A whole is that which has a beginning, a middle, and an end. A beginning is that which does not itself follow anything by causal necessity, but after which something naturally is or comes to be. An end, on the contrary, is that which itself naturally follows some other thing, either by necessity, or as a rule, but has nothing following it. A middle is that which follows something as some other thing follows it. A well-constructed plot, therefore, must neither begin nor end at haphazard, but conform to these principles (*Poetics*, Section 1, Part VII: 6).

It must be noted that Aristotle's discussion of tragedy makes up the greater part of the *Poetics* and as such is the form of dramatic storytelling to which most of Aristotle's observations in the *Poetics* refer, even though the legacy of his work has been used by critics and theorists to refer to drama and screen-writing in general (Egri, 1946; Smiley, 1971; McKee, 1998). (Other major sections of the *Poetics* include a discussion of mimesis, a lesser section on epic poetry and reference to a missing section on comedy. Scholars postulate a number of reasons for this including the hypotheses that the existing *Poetics* is what remains of the original *Poetics* as collated via the notes of Aristotle's students, or that the *Poetics* is part of a larger section of philosophical instruction that has been lost [Halliwell, 1986: 28; <http://www.english.hawaii.edu/criticalink/aristotle/index.html>]).

Of particular relevance to the study of new media narrative as an artistic construct is Aristotle's vision of plot and the artistic requirements of dramatically enabled plot (referred to as "mythos" in Greek) which has been translated by Halliwell in his extensive and informed critique of Aristotle's *Poetics* in terms of the concept of "plot-structure" (Halliwell, 1986: 5). This is a notion of plot as being more than a simple series of incidents but rather a series of incidents that is dramatic – a series of incidents that is carefully orchestrated to create a specific form of drama aimed at eliciting an emotional response from the audience, as also theorized in scriptwriting theory (McKee, 1998; Aronson, 2000; Seger, 1994).

In the *Poetics* Aristotle propounded what he considered were the elements that constituted storytelling in dramatic poetry including the elements that he considered made for “good” or quality storytelling as exemplified in the Greek form of tragic poetry (*Poetics*, Section 1: Part I: 1). As well as noting the six essential elements of dramatic storytelling, “Plot, Character, Diction, Thought, Spectacle (and) Song” ” (*Poetics*, Section 1, Part VI: 5); the vital interrelationship of the three elements of action, character and thought; and the creation of action as a consequence of causality; Aristotle also asserted that the elements of diction, spectacle and song were contributors to the quality of poetry (*Poetics*, Section 1, Part VI: 5). Most significantly he postulated the importance of the arrangement of plot as the most important element of tragic poetry: “On actions again all success or failure depends. Hence, the plot is the imitation of an action – for by plot I mean the arrangement of the incidents” (*Poetics*, Section 1, Part VI: 5). Aristotle considered that the most important aspect of storytelling in tragedy was the plot – the unfolding of the action: “Most important of all is the structure of the incidents. For tragedy is an imitation, not of men, but of life, and life consists in action, not a quality. Now character determines man’s qualities, but it is by their actions that they are happy or the reverse” (*Poetics*, Section 1, Part VI: 5).

The crucial and neglected relevance of Aristotle’s dramatic theory to new media theory and indeed to narrative theory in new media, is the Aristotelian concept of “catharsis” – the “outlet to emotion afforded by drama” (The Concise Oxford Dictionary, 1964) - as what could be seen as a consequence of plot structure and dramatic design (*Poetics*, Section 2, Part XIII: 9-10). As noted above, plot structure considered in Aristotelian terms is not an abstract mechanistic concept – rather it is a carefully crafted totality of mimetic action including the causal connections of action, character and thought. Aristotle insisted that the emotional effect of tragedy, as embodied in the concept of catharsis should be regarded as one of the essential considerations of what constitutes “good” art. This perspective is implicit in Aristotle’s discussion of the experience of tragedy which depends on the audience’s response to the moral features of the action of a play. For Aristotle the “perfect tragedy” (*Poetics*, Section 2, Part XIII: 9) should facilitate the Aristotelian notion of catharsis for the audience, it should “imitate actions

which excite pity and fear this being the distinctive mark of tragic imitation” (*Poetics*, Section 2, Part XIII: 9). Aristotle specifically noted: “Fear and pity can be aroused by spectacular means; but they may also result from the inner structure of the piece, which is the better way, and indicates a superior poet. For the plot ought to be so constructed that, even without the aid of the eye, he who hears the tale told will thrill with horror and melt with pity at what takes place” (*Poetics*, Section 2, Part XIV: 10).

Aristotle’s *Poetics* is also relevant to the discussion of new media narrative as an art form as it deals with the concept of dramatic poetry as art and the fundamental dynamics that contribute to the creation of that art – poetic structure and unity, the nature of content and the significance of the stylistic features of poetic language. Aristotle specifically considered poetry as art, particularly in Part XXV of the *Poetics* where he discussed the parameters of fictional representation and the poet’s part in the creation of a possible world: “In general, the impossible must be justified by reference to artistic requirements” (*Poetics*, Section 3, Part XXV: 23). Moreover Aristotle was concerned with what made for “good” storytelling, for the creation of story as a “beautiful object” not just a set of features or a list of schemata. For example, Aristotle commented on the essential features of tragedy as a “beautiful object” (*Poetics*, Section 1, Part VII: 6) in terms of the “orderly arrangement of parts” which must also be “of a certain magnitude” (*Poetics*, Section 1, Part VII: 6), “the structural union of the parts being such that, if any one of them is displaced or removed, the whole will be disjointed and disturbed” (*Poetics*, Section 1, Part VIII: 7).

Aristotle was insistent on the importance of role of the “language” of poetry in the overall art form of dramatic storytelling. Aristotle noted, “Song and Diction ... are the media of imitation” (*Poetics*, Section 1, Part VI: 5). Applying the Aristotelian notion of language as the medium of new media storytelling Aristotle’s term “Diction”, “the expression of the meaning in words” (*Poetics*, Section 1, Part VI: 6) or “the mode(s) of expression” (*Poetics*, Section 3, Part XXII: 19) and “Song” may be aligned with the more contemporaneous term “language”. This term equates with Manovich’s use of the word “language” in *The Language of New Media* as the over arching term used to encapsulate the features of the medium of new media. In addition it also equates with

Bordwell's use of the term "film language" as the features of film that contribute to making film an art form (Bordwell, 2001).

Although Aristotle was not overly concerned with aspects of visual storytelling and hence in contemporary times with what could be regarded as an extrapolation of his tenets to the language of cinematic storytelling, he was concerned with those elements of language that gave rise to imagery and style. In the remnants of the original *Poetics* that pertain to the artistic use of the medium of storytelling - language itself (*Poetics*, Section 3, Parts XXI-XXII: 16-18) - Aristotle focused on the stylistic elements of language that lead to what he considered to be the creation of excellent poetry. Aristotle specifically noted the importance of metaphor (*Poetics*, Section 3, Part XXI: 16) and style (*Poetics*, Section 3, Part XXII: 17) as elementary to the creation of the superior poem when discussing the language of poetry. For Aristotle, "A certain infusion, therefore, of these elements is necessary to style: for the strange (or rare) word, the metaphorical, the ornamental... will raise it above the commonplace and mean" (*Poetics*, Section 3, Part XXII: 17).

Overall Aristotle's work in the *Poetics* is relevant to this thesis for three main reasons. Firstly in the *Poetics* Aristotle established an analytic methodology which investigates the attributes of an art form and seeks to establish the essential features of that art. It is this methodology which is employed by the Russian Formalists in *Poetika Kino* (1927), by Bordwell in *Film Art* (1997, 2001), in varying degrees by Manovich in *The Language of New Media* (2001) and in the work of this thesis. Secondly in the *Poetics* Aristotle postulated a well-acknowledged theory (Egri, 1946, Smiley, 1971; McKee, 1998; Aronson, 2000; Seger, 1994; Field, 1994) for a model of drama that sets out a scenario whereby storytelling may be perceived of as a deliberately designed three act structure which successfully engages the audience's emotions. Thirdly in his discussion of the art of dramatic storytelling, Aristotle has established the precedent for the discussion of the "language" or "mode" of storytelling as an essential feature of the art form. This focus on the "poetic" aspects of the medium has also been developed by the Russian Formalists in *Poetika Kino* (1927), by Bordwell in *Film Art* (2001), by

Manovich in *The Language of New Media* (2001) and forms part of the work of this thesis in relation to cinematic narrative in new media.

2. 8 Cinematic Narrative in New Media

With this perspective on Aristotle's *Poetics* in mind, within the arena of language it is pertinent to distinguish, yet align the mechanisms of communication from its content – Aristotle's "objects" of imitation, how something is said, from what is said - Aristotle's "mode and manner". The alignment of the language and content of the art form of new media narrative like all visual media, adds another dimension to the creation of this form. Cinematic language can also be the content as well as the delivery medium of the content. Having been created by the artist for a specific ideological or artistic purpose, it is their servant and their partner. However it is not the task of this thesis to consider the content of new media storytelling, just as it was not the task of Aristotle or the Russian Formalists to consider the content. Rather it is the mode of storytelling that is the focus of this enquiry.

Aristotle refers to "the manner or mode" (*Poetics*, Section 1, Part 1: 1) of dramatic poetry interchangeably and discusses the mode as being the particular way a medium delivers its message, for example by dance, flute-playing or lyre-playing (*Poetics*, Section 1, Part II: 2). In this thesis the mode or manner of storytelling under consideration is the cinematic. Just as the rhythms and steps of dance, the music and patterns of music distinguish these art forms, the distinguishing features of film in terms of its mode of production and consumption are the unique cinematic "codes" or systems of visual communication by which filmic narratives are constructed.

Indeed cinematic narrative may appear to be articulated in a myriad of ways. It may progress via the classical three act plot structure; it may be characterized by a complexity of montage such as in Eisenstein's films; it may break with traditional theories of montage and employ discontinuous editing codes as the French New Wave filmmaker Jean-Luc Godard does in *Breathless* (1959); it may tamper with the traditional three act

structure as Quentin Tarantino does in *Pulp Fiction* (1994); it may progress via the unfolding of a mise-en-scene that gives a paramount role to film style as Pedro Almodovar does in *All About My Mother* (1999) or it may unravel metaphorically as in the Iranian films of Makmalbaf. In an art film like *Ballet Mekanique* (1924) the systematic use of the elements of style may in effect provide the narrative structure. In each of the cases above the filmmaker employs a complexity of narrative and stylistic techniques to tell a story.

2.9 Complex Narrative Structure, Form and Style

To contemplate how cinematic narrative is articulated both as a function of the systems of plot construction and as a function of the systems of stylistic construction – what Bordwell terms a film’s “formal system” (Bordwell, 2001: 327) - it is useful to investigate their complementary use in a particular film. For Bordwell style is “that formal system of the film that organizes the film’s techniques” (Bordwell, 2001: 32). As Bordwell notes “many filmmakers plan the overall style of the film to reflect the progression of the story” but no one filmmaker can hope to, or indeed want to, use every possible stylistic technique in any one film (Bordwell, 2001: 328). One of the key components of the syuzhet that Bordwell addresses in his research, and one that has original implications for the poetics of new media narrative, is the element of film style. No new media theorist has discussed the importance of cinematic style in new media narrative in the systematic manner that Bordwell uses to discuss this attribute of film narrative in his research, in particular in cinematic texts such as *Film Art* (1997, 2001). Bordwell defines style as the development of “specific techniques in patterned ways” such that we are presented with a “unified, developed, and significant use of particular technical choices” (Bordwell, 1997: 168). These technical choices include mise-en-scene, cinematography, editing and sound (Bordwell, 1997: 168). Bordwell also contends that a film’s style interacts with a film’s formal system and that they must be considered interdependently as film techniques both support and enhance both narrative and non-narrative form (Bordwell, 1997: 168). Bordwell sees the syuzhet as embodying the film in a dramaturgical process and style in a technical one (Bordwell, 1997: 168).

To assist in the investigation of the formal system of any film Bordwell saliently identifies four general steps in investigating style:

1. Determine the organizational structure of the film, its narrative or non-narrative (eg avant-garde or art cinema narrative) formal system.
2. Identify the salient techniques used.
3. Trace out patterns of techniques within the whole film.
4. Propose functions for the salient techniques and the patterns they form.

(Bordwell, 2001: 329-332).

A film's style as well as its story has an important impact on the quality of film and the way in which audiences engage with it. Just as Aristotle contended that the language of poetry could be used to create superior poetry, so may the visual "language" of cinema – cinematography, editing, mise-en-scene and sound (Bordwell and Thompson, 1997: 169-350) be considered as the contemporaneous equivalent of Aristotle's conception of style in poetry – song, rhythm, metaphor and the language of imagery. In cinema the visual elements of film are what the audience "sees" on the screen as recorded by the camera. This is not to dismiss the importance of sound and music as these aspects of film also contribute significantly to the impact of a film, however in this thesis the focus is on the visual. Briefly, cinematography includes the action of the camera and the photographic qualities of the shot including the camera movement, framing, shot duration, focus and type of film stock. Mise-en-scene includes all the elements that are "placed" in the shot including setting, lighting, costume, composition, staging, acting and colour. Editing includes the action and techniques, for example, the fade or the cut, of joining or juxtaposing of one shot with another. The American film critic, Andrew Sarris, discusses the visual elements of cinema in terms of the director or "auteur's" personal style as exhibited by the use of mise-en-scene. Sarris contends that mise-en-scene (or what Bordwell terms visual style [Bordwell, 2008: 255]) is "all the means available to a director to express his attitude toward his subject. This takes in cutting, camera movement, pacing, the direction of players and their placement in the décor, the angle and distance of the camera, and even the content of the shot" (Sarris, 1968, 1985: 276). In essence the use of the visual elements of the film is one of the most important

means by which the director creates the art of film. In contemporary times directors like the Lawrence Kasdan in *Body Heat* (1981) and Zhang Yimou in *Raise the Red Lantern* (1991), use the poetic elements of the language of film; for example, colour, mise-en-scene and camera movement, as both procedural and metaphorical aspects of cinematic storytelling. For example in the film, *Body Heat*, the colour red is used to represent the intensely overwhelming and potentially lethal consequences of Ned's sexual and psychological entrapment by Maddie in her scheme to have him murder her husband so she can collect the insurance money. In the Chinese film, *Raise the Red Lantern*, the colour red is used to signal the absolute domination of the wives by the outdated and overbearing traditions of a patriarchal society. This is represented in the highly ritualised lighting of the red lanterns outside the rooms of the wife selected by the aging unseen master as his concubine for the night. In these films the use of colour (Bordwell, 1997: 192-193) and lighting (Mikhailov and Moskvina, 1927: 151-154) form part of the battery of elements of cinematic storytelling used by both Kazan and Zhang that contribute to the unique style and narrative progression of the film.

Style is not just a decorative concept. To understand the relevance of Bordwell's Formalist distinction between fabula and syuzhet to cinematic new media narrative, it is useful to consider the functioning of the fabula and the syuzhet in the award winning Mexican film *Amores Perros* ("Love's A Bitch") (Inarritu, 2000). In terms of the fabula this is a story of three intricately interrelated tales about love, betrayal, brutality and redemption all interwoven around a pivotal car crash. The three stories are all named in a sub-title. The first, "Octavio and Susana", tells the story of a young hoodlum who steals his brother's Rottweiler and sets out to earn enough money via dog fighting to elope with his brother's wife, Susana. The second, "Daniel and Valeria", shows the disintegrating relationship between a successful businessman and his supermodel mistress for whom he has left his family. The third story "El Chivo and Maru", relates the tale of a former revolutionary turned "hit man" who is hired to kill a brother in a Cain and Abel scenario whilst himself grieving for the daughter he gave up to become a revolutionary. In terms of the syuzhet the stories unfold in approximately two hours of screen time in a complex interconnecting manner reminiscent of Tarantino's *Pulp Fiction* (1994). The film bursts

onto the screen mid climax with the central car crash and little narrative regard for setting up the parameters of time, space and causality. It is this car crash that provides the key structural link between the stories as it involves the main characters from all three stories and the dogs that are central to each character's existence.

The style and aesthetics of *Amores Perros* are equally important to the syuzhet in terms of the unfolding and impact of the film. For example, the sustained metaphor of the dogs in the story evidences a fusion of structure and aesthetics. The use of the dogs as a catalyst for action and a rendering of the mise-en-scene as a reflection of their status in the film serve both as narrative link and symbol of the character's situation. *Amores Perros* is a cacophony of saturated colour and violent character and camera movement that echoes the escalation of despair and inner turmoil of the characters. In the case of Octavio and El Chivo's stories the gritty mise-en-scene reflects both the internal despair and violence of the men and the disintegrating backdrop of the decaying cityscape and urban violence of Mexico City. In the case of Daniel and Valeria the composed and unreal nature of their "perfect" relationship is destroyed by the loss of Valeria's leg after the accident. The devastation of her life and relationship is reflected in the gradual destruction of their cool, blue pristine upper middle class apartment as they tear up the floorboards searching for her lost dog. The visceral nature of the film is also reflected in the stylistics of the cinematography, particularly in terms of the gritty, relentless hand held camera movement of Octavio's story, but also in terms of the film stock processed with silver retention for greater contrasts and texture used to create a grainy, naturalistic effect.

As a cinematic narrative *Amores Perros* (2000) illustrates a complex structuring of plot which can be discussed in terms of the dramaturgy of constructing a web of parallel narrative, whilst the urgency and cacophony of the lives of the protagonists can be discussed in terms of the systematic treatment of film style, the considered and patterned use of mise-en-scene, cinematography, and montage. Cinematic narrative such as that engendered in a commercially successful and artistically complex film like *Amores Perros* is so much more than a chain of events no matter how intricately structured. It is

so much more than a programmed causality, rendering of time and space, or interaction of interesting and highly motivated characters. It is a complex interplay of all the features of narrative – the Formalist fabula and syuzhet.

Therefore to capture the essence of the dramatic, narrative and cinematic as demonstrated in this film and encompass the attributes of narrative in a digital environment that will be scrutinised in this thesis, the following working definition of narrative in new media is coined:

Narrative in new media is the dramatic and cinematic representation of events in a fictional world. Narrative has both form and structure which is articulated during the process of narration. On the one hand narrative is an artistic formal object, which exists both of and by itself as a result of the systematic functioning of the devices of which it is composed. On the other hand narrative is a structural object which may be analysed in terms of the causal, temporal, spatial and stylistic organization and montage of segments of narrative into a dramatic and cinematic sequence.

Given the complex narrative and stylistic filmic construction of a film like *Amores Perros* that demonstrates the use of the techniques and elements of both the classic and the avant garde film, how could the linearity, closure, construction of causality, time, space, agency and art of cinematic storytelling be different in new media?

2.10 What Could be Different About Narrative in New Media? Manovich on Narrative

The essential nature of the digital object has recast a number of important issues regarding narrative form, notions of non-linearity and interactivity and the articulation of causality, time and space in a cinematic environment. The crucial factor affecting the changing nature of narrative in new media is the nature of the text itself – its material form. The narrative data of the computer-based information of new media as opposed to that of old media is easily re-configured due to its digital make-up. Various new media theorists have elaborated the essential features of the digital text and developed detailed

scenarios of the potential narrative forms and modes of engagement afforded the audience in the digital environment (Landow, 1992, 1997; Laurel, 1993; Murray, 1997; Manovich, 2001; Ryan, 1997, 2001, 2004). Of these the observations of Lev Manovich have been particularly insightful.

The idea of the “changeability” of new media narrative is best appreciated using Manovich’s theoretical conception of what data is, as discussed in *The Language of New Media*. In this text Manovich provides an important step in developing a theory of narrative in new media as he aims to record and theorize the logic driving the development of what he terms “the language of new media”. For Manovich the term “language” in *The Language of New Media*, is “an umbrella term used to refer to a number of various conventions used by designers of new media objects to organise data and structure the user’s experience” (Manovich, 2001: 7).

Manovich sees computer data existing on two levels: “Encoded in algorithms and implemented as software commands, operations exist independently of the media data to which they can be applied. The separation of algorithms and data in programming becomes the separation of operations and media data” (Manovich, 2001: 121). In *The Language of New Media* Manovich also succinctly describes how digital data is created so that one may appreciate the dual nature of new media content. “Data creators have to collect data and organize it, or create it from scratch. Texts need to be written, photographs need to be taken, video and audio material needs to be recorded. Or they need to be digitised from already existing media... Once digitised, the data has [sic] to be cleaned up, organized and indexed” (Manovich, 2001: 224). For Manovich this represents “a new cultural algorithm: reality->media->data->database-> ” which can be indexed any number of times and cross referenced or linked to any number of other databases (Manovich, 2001: 225). Manovich makes the point that the perception could be that “data is passive and algorithms active” (Manovich, 2001: 224) but he goes on to dispel this in describing the symbiotic relationship between the two:

Any process or task is reduced to an algorithm, a final sequence of simple operations that a computer can execute to accomplish a given task. And any object in the world – be it the population of a

city, or the weather over the course of a century, or a chair, or a human brain – is modelled on a data structure, that is data is [sic] organized in a particular way for efficient search and retrieval (Manovich, 2001: 223).

Although on the surface there are a number of types of new media objects - for example the computer game, the interactive movie or the new media installation - Manovich establishes the fact that underneath all of these objects are databases of material (Manovich, 2001: 227). Additionally all the functional content of these new media objects is enacted by the operation of an algorithmic sequence that is executed to accomplish a programmed task. Therefore digital narrative data may be conceived in these separate terms – the narrative data content and the algorithm that tells this data “what to do”.

2.11. Playing Host to Narrative: The Nature of Digital Content

In his work Manovich is at pains to underpin his research and practice with the establishment of an accessible theory of the nature and properties of new media content and processes. Grounding a study of new media narrative in terms of Manovich’s theory of the principles of new media enables an understanding of the material elements of emerging new media forms which will in turn facilitate an understanding of how these properties influence the structure and form of storytelling in new media.

Manovich’s theorizing of the principles of new media – “numerical representation”, “modularity”, “automation”, “variability”, and “transcoding” - which Manovich contends that a new media text must meet to be new media “object” (Manovich, 2001: 27-48), provides a basis upon which to conceptualise the creation and articulation of digital data. According to Manovich the key difference between “old” and “new” media is new media’s numerical representation. This radically changes the nature of media by turning “media into computer data, thus making it programmable” (Manovich, 2001: 52) because (a) “All new media objects are composed of digital code”, (b) they “can be described formally (mathematically) ” and (c) they are “subject to algorithmic manipulation” (Manovich, 2001:27). In essence then the concept of new media material can be

translated into numerical data, accessible through computers - the result being new media content: “graphics, moving images, sounds, shapes, spaces, and texts that have become computable; that is, they comprise simply another set of computer data” (Manovich, 2001: 20).

In terms of the discussion of the interactive nature of the new media object, and the potential for interactivity and change directly afforded by the modular and variable nature of new media, Manovich’s theory is particularly helpful. Modularity is described by Manovich as “the fractal structure of new media” such that individual elements in a new media text “are represented as collections of discrete samples” that are “assembled into large-scale objects that continue to maintain their separate identities” (Manovich, 2001:30). In essence because all of the elements exist and are stored separately, they can be interacted with or modified at any time. Manovich’s fourth principle of new media, variability, taken in tandem with modularity enables the understanding of the essential difference between old media and new media. As Manovich notes new media “is not something fixed once and for all, but something that can exist in different, potentially infinite versions” (Manovich, 2001: 36). The key parameter affecting the formal and structural nature of narrative in new media is the fact that narrative in a digital environment is programmable. This fact has important implications for the way designers create new media narrative and the way that the same designers anticipate audience interaction with narrative material in computer based narrative “objects” such as interactive television programs, movies, DVDs, net art, computer games and digital installations. Such implications include the conceptualisation of the permutations and combinations of discrete elements of narrative material that may be configured and re-configured in various ways to form varying story “pathways” where an audience may choose to follow one over another.

Manovich’s principles of automation and transcoding which relate to the machinations of computer code and its effect on the generation of the text, rather than its ultimate consumption, are the third and fifth principles he isolates. However rather than relating to the inherent material nature of the new media text, they can better be understood in terms

of the external computational action that can be effected or enacted on the text.

Automation, the combination of the numericality of the text and its modular structure is such that automation of operations within the text's "creation, manipulation, and access" can be evaluated by its external rather than intrinsic nature – it is a property of the machine. Automation removes human intention from a text (Manovich, 2001:32).

Although this principle could be interpreted as a move towards artificial intelligence, as Manovich does indeed claim in some ways, it is important to note as Manovich does that automation in software often remains transparent for both designers and readers (Manovich, 2001:32). In effect the user knows that, for example, a search engine is operating in an Internet search or that AI is controlling automated behaviours in a computer game. Transcoding, the fifth and final principle, is according to Manovich, "the most substantial consequence of the computerization of media" (Manovich, 2001: 45). Manovich states that the structure of any new media text must follow "the established conventions of the computer's organization of data" (Manovich, 2001: 45). Transcoding means that when any new media text is made digital, a designer uses such digital conventions so that the text can be designed or distributed through a digital device, for example, the interface and menus of a computer program like Word which regulate "interaction". In establishing this principle Manovich goes beyond the simplistic concept of theorising new media in terms of "old media that has been digitised" (Manovich, 2001: 47) and proposes that additionally new media must be studied in terms of its existence as a particular type of computer data that is programmable

For Manovich therefore the properties of numerical representation, modularity and variability describe the enabling properties of the digital medium. The properties of automation and transcoding describe the machine-effective properties of the apparatus of the computer machine. The principles of numericality, modularity and variability in particular can be considered as essential concepts to integrate into any understanding of the innate structure of new media objects. The fact that each and every segment of new media data can be transformed in real time or "on the fly" and the associated phenomenon of interactivity, avails new media designers and the audience with limitless opportunities to change the capabilities

of the new media text. Segments of narrative may be selected from a database and arranged and re-arranged in a potentially limitless number of permutations and combinations.

While Manovich's theory is quite explicit and accessible in terms of his theorization of the principles of new media, nonetheless it is not without its shortcomings. Manovich neglects to consider the creation of a means of facilitating the audience's engagement with new media material – what the new media theorist, Janet Murray terms “agency” or the audience's perception that direct “participation” with narrative is possible.

Manovich's conception of the database nature of the digital text may be aligned with Murray's theory in *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (1997). Murray sees the four essential properties of digital environments as being “procedural”, “participatory”, “spatial” and “encyclopaedic” (Murray, 1997: 73).

Manovich acknowledges Murray's theory whilst discussing the forms of new media objects. He equates Murray's encyclopaedic and spatial with his concepts of the database and navigable space (Manovich 2001:215). Murray's notion of the procedural may also be equated with Manovich's notions of automation and transcoding – the computer enabled properties of the digital medium. However the notion of participation that is engendered in Murray's concept of agency is lacking in Manovich's classification of the nature of digital material. Manovich describes data in terms of its machine-enabled existence, rather than in terms of its storytelling properties and the potential sense of dramatic engagement that is engendered by the cinematic capabilities of the data.

In order to consider the significance of Murray's argument as a comment on Manovich's work, it is helpful to briefly consider her metaphorical vision for narrative in new media.

Central to Murray's contention in *Hamlet on the Holodeck* (1997) is the concept of the “holodeck” itself. First introduced in *Star Trek: the Next Generation* (George Lucas, 1987) the “holodeck”:

Consists of an empty black cube covered in white grid lines upon which a computer can project elaborate simulations by combining holography with magnetic force fields and energy to matter conversions. The result is an illusory world that can be stopped, started or turned off at will but that looks and behaves like the actual world and includes parlour fires, drinkable tea, and characters who can be touched, conversed with and even kissed (Murray, 1997: 15).

With this emphasis on the conception of the holodeck as a computer generated virtual reality environment (Murray, 1997: 170) are linked the aforementioned aesthetic principles upon which Murray bases her theory of writing computer narrative – the concepts of “immersion, agency and transformation” (Murray, 1997: 181). Put simply, Murray postulates that the user (the reader in a text-based narrative, the audience in a filmic narrative) because of his or her involvement with the narrative – “immersion” (Murray, 1997: 38) is able to feel a sense of control – “agency” (Murray, 1997: 126) over narrative events of the story and thus be powerfully moved – “transformed” (Murray, 1997: 170) by experiencing the narrative in the first person. For the user, this Aristotelian influenced scenario affords a dramatic experience that is achieved in what is basically a computer generated animated environment - like that of a computer game, for example - by assuming the persona of an avatar:

In digital environments we can put on a mask by acting through an avatar. An avatar is a graphical figure like a character in a video game. In many Internet games and chat rooms, participants select an avatar in order to enter the common space (Murray, 1997: 113).

In summary the nature of digital content is such that it provides an unparalleled opportunity for the audience to interact with the narrative material in some way. It creates the potential for the audience to “change” the narrative due to its modular, variable, and machine-enabled existence. It provides the opportunity for some form of direct engagement due to its immersive and transformative powers. It is obvious that the changed nature of new media narrative content has created a need for new ways of organizing the storage of this digital narrative data to enable audience access.

2.12 Organising Digital Data: Database Narrative as a Cultural Form

Manovich addresses the storage of digital storytelling data by seeking to establish the parallels between the functions of the database and cinema and ultimately suggests that the merging of database and narrative should be considered as a new narrative form. The concept of narrative as a database that Manovich propounds is also the favoured vehicle or metaphor for narrative construction assumed (either deliberately or incidentally) by university research laboratories, narrative theorists and new media

artists. Glorianna Davenport, Director of MIT's Interactive Cinema Group, the world's foremost proponent of the form of interactive cinema (Lunenfeld, 2004: 379) conceives of new media narrative as emanating from a digitally encoded database:

Electronic narrative... (is) a process in which the authors, a networked presentation system, and the audience actively collaborate in the co-construction of meaning...A spreading-activation network is used to select relevant story elements from a multimedia database and dynamically conjoin them into an appealing, coherent narrative presentation (Davenport, 1997a: 1).

Marie-Laure Ryan, a narrative, cultural and new media theorist, also conceptualises narrative as a database for which she asserts there is the urgent need to formulate interaction protocols in order to ensure the creation of new media narrative:

To say that digital media, as randomly accessible databanks, have no built-in affinities for narrative does not mean that they cannot support a narrative experience...It will take proper design - that is, proper limitations of users' fields of options, proper selection of plot structure, and proper choice of themes - to coax narrative meaning out of an interactable database. Art has always been about overcoming constraints... (Ryan, 2004: 332).

Manovich's key research interest is also to formulate this "proper design" by working on how to code and organize a digital database so that the material selected from this database and screened is a narrative (Manovich, 2001: 237). Manovich's research focus can be translated into a concern for the implications regarding the formal and structural nature of narrative in a computer based digital environment. Manovich asks:

How can a narrative take into account the fact that its elements are organized in a database? *How can our new abilities to store vast amounts of data, to automatically classify, index, link, search, and instantly retrieve it, lead to new kinds of narratives?* (Manovich, 2001: 237) (Italics Manovich's own).

As noted above the concept of narrative as a database is firmly established in new media theory, research and practice and aptly provides a working model for the investigation of how cinematic stories are told in a digital environment. But as Manovich notes there is no way that narrative can be coaxed out of a database with unfettered audience access - unless of course a new media designer were to strategically structure this access (Manovich, 2001: 228).

In working out how to select these elements from this database one is essentially preparing for Bordwell's process of narration. Therefore in this thesis Manovich's conception of the database as "a structured collection of data" which may be organized according to different models – "hierarchical, network, relational and object-oriented" (Manovich, 2001: 218) - is a sound starting point for the primary stages of a poetics of new media. In Manovich's conception of narrative as database the "screened version" of the narrative is not set due to the digital nature of new media. What the audience sees in a new media database narrative is in effect a selected "pathway" of material constructed "on the fly" from a database of possibilities. As is the case for Manovich's research, it is the way in which the digital "database" of narrative is organised in structural and formal terms so that as it appears as a "collections of items on which the user can perform various operations – view, navigate, search" (Manovich, 2001: 219) that is of interest to this thesis.

Manovich validates the existence of the database form by reference to both old and new media. It is pertinent to note that Manovich supports his treatise by documenting the dominance of the database form in new media, yet contends that it is only in cinema that can be found excellent exemplars of database narrative. Manovich establishes the predominance of the database form in new media by citing new media exemplars of databases as being multimedia encyclopaedias, commercial CD and DVD-ROMs and the Internet (Manovich, 2001: 236). However Manovich considers the cinematic work of the filmmakers Peter Greenaway, for example, *The Draughtsman's Contract* (1982) and *Prospero's Books* (1991), and Dziga Vertov's *Man with a Movie Camera* (1929) to be key exemplars of database storytelling. He suggests that in Greenaway and Vertov's work the reconciliation of database and narrative is demonstrated. As Manovich rightly notes, Greenaway in particular uses different systems other than narrative - for example, numbers, objects and colours - to order his films in an attempt to deliberately subvert the traditional linear approach to the ordering of sequences of film. For example, *The Draughtsman's Contract* figures around twelve unordered drawings which are in the process of being created by the draughtsman (Manovich, 2001: 237- 238). However

Manovich fails to mention that within Greenaway's seemingly unordered sequences of film, each discrete sequence follows the rules of dramatic narrative structure. In his validation of the database form, Manovich also gives a detailed consideration of Dziga Vertov's *Man with a Movie Camera* (1929) which is for him "perhaps the most important example of the database imagination in modern media art" (Manovich, 2001: 239). *Man with a Movie Camera's* subject is "the filmmaker's struggle to reveal (social) structure among the multitude of observed phenomena" using the tool of perception that is enhanced by the camera (Manovich, 2001: 240). Manovich discusses the three levels of organization that can be decoded from this complex avant-garde film. The first is the story of the cameraman shooting the film; the second the shots of the theatre audience viewing the finished film; and the third the film itself – Russian footage arranged in terms of the progression of a day, all edited together by a variety of film effects including fades, superimpositions and various montage techniques including juxtapositions, alternating rhythm and intercutting (Manovich, 2001: 241). According to Manovich this film constitutes an attempt by Vertov to turn a catalogue of "effects", in this case the images observed by the "kino-eye" (the then new cinematic techniques of recording images and manipulating them to decode the world into a new narrative form) into a database.

Manovich contends that Vertov's 1929 film has great relevance to new media:

It proves that it is possible to turn 'effects' into a meaningful artistic language ... Vertov's goal is to seduce us into his way of seeing and thinking, to make us share his excitement, as he discovers a new language for film. This gradual process of discovery is film's main narrative, and it is told through a catalogue of discoveries...Vertov is able to achieve something that new media designers and artists still have to learn – how to merge database and narrative into a new form (Manovich, 2001: 243).

Manovich is correct in analysing Vertov's film as he does but he fails to consider the significance of the organising factors which operate to create form; for example, the documentary style social commentary, in Vertov's avant-garde film. Whether or not *Man With a Movie Camera* may be regarded as a narrative rather than, say, an observational documentary, is a contentious issue. Manovich concludes that this film seduces the viewer by its cataloguing of effects – an experience Manovich seems to capture in his *Texas* (Manovich, 2004). However *Man with a Movie Camera* does not engage the

viewer in Aristotle's dramatic terms by engendering a sense of engagement, rather it is a sense of the observation of a series of events.

While it is not imperative that all stories affirm a canonical structure nonetheless there are methods of structuring narrative that may be applied to new media storytelling – these include what Bordwell and Thompson term narrative and non-narrative form (Bordwell and Thompson, 1997: 128). The form of the traditional narrative film is based on Aristotle's three act dramatic structure. As Bordwell notes "Narrative films tell stories; that is they contain a series of causally related events that take place in time and space" (Bordwell, 1986: 44) whereas the non-narrative film form utilizes other means of organization. For Bordwell and Thompson these include categorical, rhetorical, abstract and associational systems of organization (Bordwell and Thompson, 1997: 128). A categorical system of organization is one in which the film is organized by grouping narrative material via parts or categories (Bordwell and Thompson, 1997: 129). For example, Leni Riefenstahl's Nazi film of the 1936 Olympics, *Olympia* (1936), is organised around the events of the Olympics. A rhetorical film presents an argument and provides evidence to support the argument (Bordwell and Thompson, 1997: 129). A film such as Alain Resnais' impressionistic *Night and Fog* (1955) in its subtle denigration of the Second World War displays elements of the rhetorical form. In a film organized in an abstract form, "the audience's attention is drawn to abstract visual and sonic qualities of the things depicted – shape, colour, aural rhythm, and the like" (Bordwell and Thompson, 1997: 129). Such a film is the experimental film *Ballet Mekanique* (1924) which presents a "mechanical dance" based on the animation of objects, people and machines related via, for example, shape or movement. (Bordwell and Thompson, 1997: 148-154). A film that is constructed using an associational form is one which "juxtaposes loosely connected images to suggest an emotion or a concept to the spectator" (Bordwell and Thompson, 1997: 129). In contemporary music television associational form is used to provide a narrative to accompany a song. It is apparent that if one is to apply Bordwell's formal concepts to these films, Greenaway's *The Draughtsman's Contract* uses a categorical system of organization whilst Vertov's *Man with a Movie Camera* uses a more rhetorical approach.

2.13 Conclusion

It is evident from the above that Manovich turns from traditional models of cinematic storytelling and foregrounds his desire to create other narrative forms. This presents somewhat of a conflict in Manovich's work because on the one hand he applauds narrative as the key method of information access in new media and on the other he decries its traditional forms. Manovich is of course setting the scene for his promotion of database narrative. However, overall Manovich is correct in stating that contemporary manifestations of the database form in new media are as yet inadequate in terms of formal organization (Manovich, 2001: 218). Manovich's contention that narrative is a database is of course not original. Theorists like Laurel (1993), Murray (1997) and Aarseth (1997) imply the existence of a database but do not set out to isolate it as a cultural and new media form. Theorists like Davenport (1996, 2004), Brooks (1996) and Shaw (2004) actively engage in research using the database form yet undervalue the importance of the formal, narrative and stylistic features of the cinematic mode of storytelling. But Manovich's theorising and attempt to establish "a poetics, aesthetics, and ethics" of the database (Manovich, 2001: 219) is unique in new media theory and the deliberations he makes about the modular, variable and programmable nature of the database provide a sound basis for discussing the poetics of narrative in new media. However, this thesis argues that Manovich's neglect of traditional models of cinematic storytelling does not serve his research and theory well. In fact, Chapters 4 and 5 of this thesis show that an analysis and application of dramatic and cinematic theory to Manovich's work enhance the understanding of the creation of narrative in new media and are vital in developing a comprehensive theory of this emerging genre as substantiated in the *Poetics of Mosaic Narrative* and theorised below.

In this chapter the use of the poetic methodology has been validated as a means of thinking about the creation of a new media object in terms of the fabula and the syuzhet – story and the processes of plot construction. The imperative to consider a new media story as a complex entity involving the essential features of dramatic storytelling as first postulated by Aristotle has been considered. In particular the notion of new media

storytelling as an artistic, organic object where its constituent elements function together to create a cinematic digital story has been established.

In the next chapter, Chapter 3, the development of the *Poetics of Mosaic Narrative* using Manovich's work as case study is commenced. In Part I of Chapter 3, in order to situate Manovich's work in the new media narrative debate and gain a perspective of the magnitude and importance of his cinematic and interactive computer based narratives as presented in *Soft Cinema* (2005), other key exemplars of narrative new media are briefly overviewed. In particular the implications of interactivity and non-linearity are investigated in two key areas of research – the interactive television arena and the university research lab. The search for complexity of structure and form as an extension of non-linearity and interactivity in the digital domain is also considered particularly in the simple branching narrative structures of new media as opposed to the complex narrative structures of contemporary cinema. In Part II and Part III of Chapter 3, the Formalist and Structuralist tools of analysis crucial to an informed examination of Manovich's work are investigated in order to facilitate the ordered creation of a poetics. The analytic tools useful for the analysis of new media objects and the gradual construction of a poetics are examined in terms of Structuralist narrative theory which investigates the dramatic structure of storytelling and Formalist film theory which investigates the attributes and functions of cinematic storytelling.

CHAPTER THREE: NARRATIVE AND NEW MEDIA

PART I: CONTEMPORARY NEW MEDIA NARRATIVE

Introduction

The investigation of how new media storytelling may utilize the stylistic as well as dramatic and narrative elements of cinematic narrative in the digital environment is an important focus of this thesis. The Director of MIT Media Lab's Interactive Cinema Group, Professor Glorianna Davenport, encapsulates this focus in a concern with how new media storytelling may leave "the digital techno age" and enter the realm of "the digital expressive age" (Davenport, 2004: 162) and address the struggle between artistic expression and technological innovation. The MIT Media Lab Interactive Cinema Group's goal is to research "the formal structure, construction methods and social impact of highly distributed motion video stories". It aims to create "something new, something more complex and something more personal, as if in conversation with an audience". (Interactive Cinema Group home page @<http://ic.media.mit.edu>).

The complexity of form and structure which researchers such as Davenport search for already exists in both mainstream and avant-garde cinema. In the cinematic environment the treatment of the narrative elements of the dramatic and the cinematic that have been identified as the essential focus in the quest for effective artistic new media storytelling are well established. These elements include the complexity of multi-form plot and non-linearity, agency and interaction, and the rendering of space via montage and mise-en-scene, which drives the work of new media researchers like Davenport. They are found in, for example, the use of aesthetic techniques such as the highly rendered mise-en-scene of the French "cinema du look" in Jean-Jacques Beineix's film *Betty Blue* (1986) with its intricacy of internal montage, composition, lighting and colour. They are found in the use of montage in depth as practised via the deep focus cinematography of Orson Welles' *Citizen Kane* (1941). They are also found in the sophistication of non-linear narrative construction and the dynamic cinematography of Inarritu's *21 Grams* (2003).

While the features of cinematic narrative canvassed in this chapter – non-linearity, interactivity, immersion, agency and complex narrative structures - are vitally important

elements in the construction of both new media and cinematic narrative, the key element that has not been addressed in new media narrative research has been the artistic creation of the dramatic and cinematic nature of narrative in terms of the elements of montage, mise-en-scene and cinematography. Whilst it is acknowledged that, for example, Laurel (1993), Mateas (2001) and, to a certain extent, Brooks (1999), have addressed the role of drama in the shaping of interactive drama, to date this research has been concerned with either text based stories, static images, virtual worlds and characters generated by computer graphics and not the shaping power of dramatic narrative in a cinematic environment. While it is also acknowledged that Pledger and Shaw (2004) specifically focus on the cinematic in the creation of their panoramic virtual worlds, their work is essentially non dramatic – vignettes of narrative with little dramatic action are activated by viewer involvement in the form of “eavesdropping”. In the theory and practice considered in this chapter, the most significant coalescence of the dramatic and cinematic in new media storytelling is found in the domain of interactive television and the artistic practice of the new media artist, Megan Heyward (2005), who successfully uses the stylistic techniques of montage, cinematography and mise-en-scene in a non-linear narrative environment.

Part 1 of this chapter constitutes an overview of new media narrative research and practice in terms of its utilization of the traditional parameters of narrative. This includes an examination of the concepts of “interactivity”, “non- linearity”, “agency” and “immersion” and the building of fictional worlds as evidenced in the work of three of the world’s leading new media research labs – MIT Media Lab (USA) the Oz Group at Carnegie Mellon University (USA) and Australia’s *iCinema* at the University of New South Wales; as well as computer games; interactive television and interactive drama. In particular new media narrative research and practice are examined in the light of relevant theory from Manovich’s *Language of New Media* (2001). In order to compare the narrative and cinematic nature of new media storytelling with that of traditional cinema, a detailed structural and formal analysis of the contemporary multi-strand narrative film, *Run Lola Run* (1998) is presented as a conclusion to this section.

3.1 Narrative and the promise of the digital environment

A genuinely digital text or new media object is dependent on the computer as its means of existence. The new media narrative theorist, Marie Laure Ryan, asserts that “what makes a text dependent on a digital environment is its exploitation of what I regard as the most distinctive features of computer systems: their responsiveness to a changing environment” (Ryan, 2004: 329). In Chapter 2 of this thesis the features that Manovich regarded as essential to the existence of the new media object were discussed. By conceiving a new media object as one based on the principles of numericality, modularity, automation, variability and transcoding (Manovich, 2001: 27- 48) which Manovich proposes as an inherent characteristic of material hosted by a computer database, it is possible to understand how this “responsiveness” or potential to change may be conceptualised.

When the audience is afforded the ability to change or respond to a new media object “we call this property interactivity” (Ryan, 2004: 329). Interactivity, particularly in reference to non-linear narrative, has been variously defined (Murray, 1997: 30; Manovich, 2001: 227). Ryan’s discussion of interactivity provides a sound foundation for the consideration of this much debated (Lunenfeld, 2004: 377-389) new media phenomenon. Ryan asserts:

The interactive character of digital texts manifests itself as a feedback loop that sends information from the user’s body and its extensions (mouse, keyboard, joystick, magic wand, data glove, or headset) to the processor, often through the mediation of a virtual user body; from the processor to the display, which is modified by the execution of a command issued by the user; from the modified display to the mind of the user; and back to the using body. Digital media do not simply place us in front of a static text; they situate us inside a system that continually produces a dynamic object (Ryan, 2004: 329-330).

Ryan’s conception of the interactive character of a digital text highlights the dynamic nature of the media object as well as the actual activity performed by the audience. For example, “physical” interactivity may range from something as simple as “clicking” the

computer mouse on an image to activate a response to a program, to something as complex as completing a series of steps in a puzzle in order to proceed to the next level of a computer game such as *Myst* (1993). This type of interactivity may also involve the potential for navigation (for example choosing options on a DVD or exploring the complex 3D world of a computer game) or the control of virtual objects. In the interactive television world it may involve the ability to communicate with (other) characters by, for example, texting in on-line games, or text messaging in an interactive television series such as *Fat Cow Motel* (2003). Finally in online virtual world games such as *Second Life* it may involve the ability to receive or acquire objects, either virtual or concrete. All of these conceptions involve the idea of the audience or user “doing” something which involves a physical action in response to narrative content or data.

Complementary to the concept of interactive non-linear narrative is the concept of narrative as a database canvassed in the previous chapter. This concept is based on the fact that in the digital environment afforded by the computer, the author may program, the computer may generate, or the audience may choose to configure the available segments of narrative data into different “pathways” of story material in any one interaction. Manovich observes that the distinguishing features of digital media include its enormous storage facility and its random access which is best accessed by the database and therefore narrative as database (Manovich, 20001: 227). As noted previously databases consist of two key elements, a collection of data organized according to parameters set by the author and a search algorithm with parameters that allows the user to the computer to retrieve information according to their requirements. Manovich defines database as “a structured collection of data. The data stored in the database is organized for fast search and retrieval by a computer and therefore, is anything but a simple collection of items” (Manovich, 2001: 128). A database is also an open structure in that it may be continually added to. However as Ryan contends: “narrative by contrast, is a way of organizing experience that follows a rigorous internal logic, makes sequence supremely significant, and strives towards closure” (Ryan, 2004: 332). Ryan goes on to assert that “narrative cannot be interrupted midstream; once a character has decided to take action to solve a problem, the story must follow the course of action to the

conclusion, either in success or failure” (Ryan, 2004: 332). Ryan has a valid point in stating that narrative is a system that follows a carefully structured logic however the fact that new media narrative may be interrupted midstream exists. This is in effect the point of interaction where the audience or computer avails itself with the potential to effect a change.

In a new media narrative therefore whether the audience enacts a change by means as varied as a mouse or a headset, the narrative data is presented in such a way that the audience may choose to create or follow a number of different segments of story material. At the point of interaction the story itself may unfold in simple chronological order, or it may consist of a complex construction and re-construction of time involving flashback, flash-forward or the use of parallelism. Ultimately for the audience a narrative is experienced in what may be conceived of as the linear progression of time – the time of the telling of the story. This experience of narrative in terms of the duration of the story whether it is of simple or complex construction is discussed in terms of its “linearity”. Thus in the new media environment this attribute has been variously termed “non-linear narrative”, “interactive narrative” or “interactive non-linear narrative”.

The interactivity and non-linearity of narrative also brings into focus questions about the nature of narrative in new media at the point of the “interaction” of the discrete packages of data drawn from the database. In particular it involves a consideration of the parameters informing the selection or choice from the vast potential of the narrative material stored in the computer’s memory. These parameters involve structural choices about narrative function and formal choices about cinematic style – montage, cinematography and mise-en-scene. It is the decisions that must be made for the structuring of the subsequent narrative both in terms of dramatic and narrative causality and artistic form that are important. In the following sections the interactivity or non-interactivity, and the linearity and non-linearity of narrative in the new media ecology - where information is hosted in a database of unlimited potential combinations - will be discussed in terms of how the audience or user is availed of a choice and the implications of this choice in the articulation of a cinematic story.

3.2 Which Story to Choose? Interactivity, Non-linearity and the Forking Path

In recent years the technological capabilities of the computer have resulted in a plethora of new media narrative forms. The computer based narratives that are available today include: hypertext fiction, a predominantly prose based digital form driven by clicking on interactive hypertext to access different parts of the story or different web sites; interactive drama, a form of drama developed in computer labs where the user interacts with AI-generated characters; interactive television drama, a televisual form hosted on the multiple platforms of television, the web or the computer; virtual worlds, designed environments or digital installations in which users participate with computer generated characters or immerse themselves in panoramic images in real time; computer games in which the user participates in a goal focussed narrative usually involving skills similar to those seen in arcade games, and the web-based or the disk-based digital art of independent artists. Despite the unfolding of new forms as Ryan (2004) asserts “ the question of the narrative benefits of interactive environments is far from settled. Interactive narratives obviously exist. But is the most distinctive property of digital media a boost, or is it an obstacle to narrative?” (Ryan, 2004: 330). To address this question it is helpful to consider briefly the development of the theory of interactivity and non-linearity in the new media narrative environment.

Notions of interactivity and non-linearity in the digital arena were first developed in reference to the text and graphics based literary hypertext (Landow 1994, 1997). The foremost literary hypertext theorist, George Landow, observes that linearity is a “quality of an individual reader’s experience within a single text and his or her experience following a reading path, even if that path curves back on itself or heads in strange directions” (Landow, 1997: 184). Today the common narrative navigational structures in new media narrative are linear, branching and multipath or multilinear (Heyward, 2002: Unpublished workshop address). Linear structures commonly move forward in the traditional linear narrative sequence. Branching structures are the common format for “interactive narrative”. In the branching structure the story is essentially linear but

choices become available at certain points. Heyward notes that the pathways that may be activated at these plot points may be conceived of in terms of, for example, “forking branches” where the story goes in other directions or “evaporating branches” where it reaches a dead end (Heyward, 2002: Unpublished workshop address). According to Heyward multilinear structures “are another common way of conceptualising interactive narrative, games and multipath drama, allowing the user to follow multiple characters’ progress through a story, but only for one character at a time” (Heyward, 2002: Unpublished workshop address).

The new media theorist, Janet Murray (1997), terms interactive non-linear narrative “multiform narrative” which is “a written or dramatic narrative that presents a single situation or plotline in multiple versions, versions that would be mutually exclusive in our ordinary experience” (Murray, 1997: 30). Similarly the researcher, Espen Aarseth, defines a non-linear text as “an object of verbal communication that is not simply one fixed sequence of letters, words, and sentences but one in which the words or sequence of words may differ from reading to reading because of the shape, conventions, or mechanisms of the text... For a text to be non-linear, it must have a positive distinction: the ability to vary, to produce different courses” (Aarseth 1997: 41). In the final reading or rendering of the text the audience must “interact” to choose which course they will take. Aarseth also highlights the fact that a decision must be made at the point of interactivity. He contemplates the physical application of interactivity in what he terms an “extranoematic” sense, which involves both a physical effort and an intellectual process to effect this effort. In *Cybertext* (1997) Aarseth builds on the concept of non-linear narrative by adding what one could call the kinaesthetic context of user action or interactivity in terms of the structure of the cybertext itself. For Aarseth this type of interactivity

Focuses on the mechanical organization of the text, by positing the intricacies of the medium as an integral part of the literary exchange. However, it also centres attention on the consumer, or user, of the text, as a more integrated figure that even reader-response theorists would claim. The performance of their reader takes place all in his head, while the use of cyber text also performs in an extranoematic sense... This phenomenon I call *ergodic*... in ergodic literature, nontrivial effort is required to allow the reader to traverse the text (Aarseth, 1997: 1).

Whilst Aarseth's research is predominantly focused on both off-line and on-line computer games environments, his observation that the new media narrative or "cybertext" must be mechanically organized to create the potential for interactivity plus his observation of the more complex cognitive nature of the interactive process is important in the development of the concept of interactivity as much more than a simple physical process. It is apparent from Aarseth's observations that the structural organization of the text is also important in the interactive process.

Perhaps the most all-encompassing definition of "interactivity" is one that addresses all of the elements above – the perceived ability of the audience or user to effect a change or make a choice in regard to their interaction with new media object. In this instance the interactive television arena embraces interactivity as a commercial imperative. Here interactivity has been defined as "anything that lets the television viewer or viewers and the people making the television programme or service engage in a dialogue. More specifically, it can be defined as a dialogue that takes the viewers beyond the passive experience of watching and lets them make choices and take actions" (Gawlinski, 2003: 5).

3.3 Interactivity and the "new" in New Media

Despite these impressive conjectures and examples is the liberation or potential interactivity of narrative really new? All of the above definitions posit that interaction essentially involves choosing to follow a different storyline in a new media object. In essence they present the ability to follow a complex structured story that must be experienced in linear time. It would seem that such a phenomena is not new. Homer's *Odyssey* (c1000BC), the epic Greek story of Ulysses' return from the Trojan Wars to his faithful wife, Penelope, dates from the tenth century before Christ. As well as being a story of a great, meandering journey, the *Odyssey* hosts a complexity of tales of Ulysses' encounters with incredible obstacles – shipwrecks, battles, monsters, the temptations of the sirens and the enmity of the sea-god, Poseidon – all plotted in a highly structured and

intricate use of flashback (Homer, 1946). In the *Poetics*, Aristotle commented on the nature of the complex plot, with reference to Homer's *Odyssey*, his favoured example of epic poetry. Aristotle demonstrated Homer's superior use of the elements of drama in constructing this epic poem, observing that rather than trying to represent the complete and complex phenomenon of the Trojan War, Homer focused on a sole event in each of his epics, adding other events as episodes to add drama and interest without detracting from the central story (*Poetics*, Section 3, Part XXIV: 20-21). In effect the great epic of the *Odyssey* is an interactive non-linear narrative – it is non-linear in its multiple pathways of story, it offers interactive choice in its delivery – the storyteller or audience may choose which part of Homer's tale they wish to experience.

Manovich is equally unimpressed with the concept of non-linear or interactive narrative as something that is complex and not accessible prior to the advent of the technology of new media. Manovich therefore categorizes “interactive narrative” thus:

An interactive narrative (which can be also called a *hypertext* in an analogy with hypertext) can then be understood as the sum of multiple trajectories through a database. A traditional linear narrative is one among many other possible trajectories, that is, a particular choice made within a hypertext (Manovich, 2001: 227). (Original emphasis).

In his contemplation of interactivity and new media theory Manovich provides a comprehensive concept of interactivity and non-linearity. As Ryan remarks, “Much of the debate between traditional narrativity and interactive textuality has been conducted on the level of propaganda. One of the few critics who have been willing to look at the roots of the problem is Lev Manovich” (Ryan, 2004: 331). Manovich states that the programmable and thus changeable potential of new media due to its digital nature has lead to one of the most popularly held notions about new media – that it is interactive. Manovich gives a fresh and concrete conception of interactivity that presents it as an opportunity set up in the creation of the object itself, rather than a wondrous feature of what an audience might do with the object. In this discussion on “What New Media is Not”, Manovich considers one of the common conceptions of “interactivity” as it is presented in new media literature:

New media is interactive. In contrast to old media where the order of presentation is fixed, the user can now interact with the media object. In the process of interaction the user can choose which elements to display or which parts to follow, thus generating a unique work. In this way the user becomes the co-author of the work (Manovich, 2001: 49).

Although Manovich notes that this is a common conception of interactivity, he deliberately avoids using the generic term “interactivity” in association with new media, dismissing it as too broad to be useful or indeed as a tautology of sorts because as he notes, modern computer use is by definition interactive. As Manovich contends by using the keyboard or the mouse to manipulate information on the screen the user is “interacting” with the computer (Manovich, 2001: 55). Manovich discusses what he terms “branching interactivity” or the simplest kind of interactivity. Here the user plays an active role in determining the order in which items generated by the database are accessed. More complex types of interactivity exist in more highly structured programs. Manovich terms this “open interactivity” where elements and the structure of the object are generated or modified in response to interaction with the program “on the fly”. Manovich contends:

Although it is relatively easy to specify different interactive structures used in new media objects, it is much more difficult to deal theoretically with users’ experiences of these structures. This aspect of interactivity remains one of the most difficult theoretical questions raised by new media (2001: 56).

In addressing this question of the user’s experience, Manovich asserts that indeed all art can be considered to be “interactive” in some way. For example, the techniques of ellipsis in literary narration and montage in film, the selective representations of theatre and painting and the spatial experience of architecture and sculpture, all require the audience to interact with a work of art, whether it be by filling in the mental gaps or physically moving the body (Manovich, 2001: 56). In particular Manovich notes:

When we use the concept of “interactive media” exclusively in relation to computer based media, there is the danger that we will interpret “interaction” literally, equating it with physical interaction between a user and media object (pressing a button, choosing a link, moving the body), at the expense of psychological interaction. The psychological processes of filling-in, hypothesis formation, recall and

identification, which are required for us to comprehend any text or image at all, are mistakenly identified with a objectively existing structure of interactive links (Manovich, 2001: 57).

Manovich's discussion of interactivity continually focuses on modern media inventors', artists', critics' and psychologists' fascination with how new media technologies externalise and objectify reasoning, thus setting up a scenario that enables control of the audience's mental representations and operations by the new media designer. Manovich observes that the principle of hyperlinking which forms the basis of interactive media "objectifies the process of association, often taken to be central to human thinking" (Manovich, 2001: 61). In such a situation he equates the human processes of reflection, problem solving and association as a public process orchestrated and standardised by others:

Before we could look at an image and mentally follow our own private associations to other images. Now interactive computer media asks us instead to click on an image in order to go to another image. Before, we would read a sentence of a story or a line of a poem and think of other lines, images, memories. Now interactive media asks us to click on a highlighted sentence to go to another sentence. In short, we are asked to follow pre-programmed, objectively existing associations (Manovich, 2001: 61).

However Manovich develops this idea no further as is his modus operandi in *The Language of New Media*. Instead he leaves his reader with the thought that "What before had been a mental process, a uniquely individual state, now became part of a public sphere...What was private became public. What was unique became mass-produced. What was hidden in an individual's mind became shared" (Manovich, 2001: 61).

Considering interactive narrative in Manovich's terms makes eminent sense from a number of perspectives. Instead of interactivity presenting as a "new" phenomenon of new media it is in fact a re-constituted phenomenon. Whereas once interactivity involved interacting with cinema in terms of access to a "fixed" object, now due to the nature of the digital database, access to all of the material of a narrative is available. This is best understood in terms of the new media concept of the "pathway" where instead of one predetermined "pathway" of narrative material unfolding in linear time, now there are

many potential pathways. However in the final analysis whether interactivity is something as simple as clicking the computer mouse to access another part of the story or something as complex as editing an interactive drama on the fly, the crucial point is that interactivity is not a “new” phenomenon of new media, but is an externalisation of a mental process, a physical manifestation of a cognitive choice.

However this externalization of a choice to effect a change on the content of a new media object, either by a human audience, or in the case of the computer, the narrative search engine, has made the pursuit of interactivity a priority of the new media research agenda in all fields, including commercial television, the university research lab, net art and computer gaming. In the next section this research is investigated to identify the part that interactivity as a means of engaging with narrative has to play in cinematic exemplars of new media storytelling.

3.4 Interactivity and Database Research - Designing the Narrative Experience

Interactive narrative research is the focus of two of the most prestigious university media research centres in the world - MIT Media Lab and Carnegie Mellon University. MIT Media Lab's Glorianna Davenport (1997) succinctly crystallizes the database-operating concept of interactive computer based narrative that is at the heart of the research considered in this thesis.

Today, technology is changing the face and the soul of media stories. Powerful, sophisticated computational engines can massage all types of media objects - video, audio, text, etc. - into meaningful, cohesive, aesthetically pleasing narrative experiences. These media objects can be manipulated at any level of granularity: as complete stories; as scenes or events; as shots and sounds; as individual elements within a frame. In the digital story world, even individual "bits" can be made graspable and manipulable. Plots are devised and interactively revised by software which emulates the knowledge and expertise of human storytellers. Presentations are customized and personalized by software which embodies the skill and judgment of human editors. Synthetic characters - free to perform with some degree of autonomy, driven by their own internal needs and desires, and behaving with their own idiosyncratic personalities - act out their roles within artificial

environments and customizable information spaces (Davenport, 1997b: 9-10).

In the quest to explore “the technical, cognitive and aesthetic bases of satisfying human interaction as mediated by technology”, the Interactive Cinema Group’s projects have focussed on the creation of interactive computer based stories (Davenport, 2004: 163-165). Janet Murray notes that Davenport’s Interactive Cinema Group has developed “several graceful alternate presentation styles in which a continuous movie plays before a viewer, offering automatic default sequences when no choice is made or responding to the suggestive positioning of a cursor by displaying an appropriate alternate selection in a non-interruptive, seamless manner” (Murray, 1997: 259).

Like Manovich, Davenport sees the elements of old media as fragmentary and digitally enabled, “collection based and computationally ready”, accumulating “to be sampled, navigated, sequenced, rendered, repurposed, and exchanged at a moment’s notice” (Davenport, 2004: 160). Davenport terms such a collection of data a “media fabric” and posits that in this environment “the future media explorer must move fluidly between consumption and creation” in what Davenport considers should have the significant attributes of “synergy, mindfulness, improvisation, self-reflection and connectedness” (Davenport, 2004: 161). Among the research projects and experimental frameworks that Davenport supervises as Head of the Interactive Cinema Group, three specifically come under the rubric of the media fabric project which ultimately aims to develop tools that enable audience co-creation of computer based storytelling. These include *Mov-its*, a custom designed camera phone application for creating and sharing multimedia messages based on the situation of communicating and consoling a friend who is in hospital; *Mindful Documentary*, a “mindful” video camera enacted documentary that is co-created by the camera from a database of semi-structured in-camera “story representations” and *Emonic Environment*, a program exploring the “improvisational” potential of computer based music (Davenport, 2004: 163-165). Davenport points out that such projects are developing prototypes and as such are being continually refined. “In our future work, we attempt to integrate these devices with ever more meaningful organization and search mechanisms implemented in ways that capitalize on our improvisational passage within

the fabric” (Davenport, 2004: 168). All of these projects are searching for the means of imbuing “a computer with the mental capacities necessary for story comprehension” as enabled by artificial intelligence (Davenport, 2004: 165).

As a completed exemplar of an interactive narrative driven by narrative encoded software, MIT Media Lab’s Michael Brooks’ *Agent Stories* is worthy of note. *Agent Stories* “is primarily intended for an author’s use in the creation of metalinear multiple point of view textual stories, before the stories are realized as multimedia presentations using video audio and still pictures” (Brooks, 1999: 26). The metalinear narrative is what could be termed a “self-reflexive” narrative search engine - a computer based writing tool of collected small related story pieces designed to be arranged in many possible ways with the aid of the story engine, *Agent Story*, developed by Brooks specifically as part of his PhD thesis. In its metalinear guise this software writing tool offers the writer “knowledgeable feedback” about narrative construction during the creative process. *Agent Stories* is one of the projects from the Interactive Cinema Group, which looks specifically at creating linear stories from a first person point of view (available for each of the characters) from a web of stored computer-animated story segments. The major focus of the research was to develop a software tool to store, represent and sequence metalinear stories. The effectiveness of this tool was then observed by using writers to test the software by creating text based “metalinear” stories which were then to be “realized as multimedia presentations using video, audio and still pictures” (Brooks, 1999:203). However Brooks (1999) himself notes in his thesis, *Metalinear Cinematic Narrative*, that these stories succeeded as simple accounts of an event but became difficult to structure in any complex manner:

These stories are included in this document because they are a good example of how NOT to write metalinear stories. In fact, they are not metalinear stories. *Crossing the Street* is a collection of multi-linear stories. Each story has a strong linear plot line. Events in each story are in a particular order and would not make sense if they are rearranged. Parts of the story can be excluded, but not re-sequenced. The job of the story engine in this situation is to switch back and forth between the plotlines at appropriate times. Multi-linear cinematic narrative development tools continue to be an active area of research... The goal of *Agent Stories* from the beginning, however, was to create metalinear cinematic narratives. The stories were

presented simply, with each granule having only one narrative primitive and one link. Because of this simple representation, the *Agent Stories* prototype was able to produce a multi-linear result with two characters. As more characters were added to the database, the results became less desirable (Brooks, 1999: 165).

It is difficult to assess exactly how Brooks' narratives were cinematically presented, since for an Australian researcher, results are available only in printed form. However an examination of these scripts would seem to reveal that segments were written in the third person, shot in video, digitised and added to the prototype database for playback and stimulus for the prospective writer's own text based story. It would also seem that the cinematic segments, rather than being rendered as drama, were rendered as digitised video with accompanying voice-over. However of particular note in terms of the dramatic potential of the narrative, each segment was appended with a description of its role in the story: character intro, conflict, diversion, solution, ending or resolution. One such segment reads:

Pushed her along [Resolution]

The car was clearly going to hit us too, I mean, there was no question about it. But I had to be cool, ya know. I mean Anne and I had been serious for about twenty four hours, already a personal best for me, and I sorta wanted to see what forty eight hours felt like. But I was cool. I said: "Oh that outfit! Yeah! Let's get over there fast and take a look", pressing on her back a little. So we rush over to the traffic island with that car just missing us and the back wheel of my bike- the Jerk! I don't think Anne even noticed the car (Brooks, 1999: 166).

In his software design Brooks' work is commendable in its attempts to create a database of cinematic narrative segments that addresses, albeit in a somewhat basic fashion, the concept of the Aristotelian dramatic three-act structure. However, the major flaws in Brooks' research can be traced to two essential principles of dramatic and cinematic storytelling. Firstly to dramatically engender audience engagement a story must enable the experience of Aristotle's catharsis. Brooks does attempt to structure *Agent Stories* in a dramatic manner by using narrative coding – resolution, climax etc – but as yet there is no structured plan for the unfolding of these elements into a complex narrative. Secondly

a cinematic story is much more than voice-over and a collection of digitized visual segments that exist merely to enable the writing of a specific software application.

While the Interactive Cinema Group's projects centre on digitally based cinematic storytelling with a focus on software research, it is evident that the search to imbue the computer with some sort of metanarrative cognition is fundamental to MIT's core values and underlines the importance of narrative structure as the basis for the creation of stories. Davenport emphasizes this factor whilst acknowledging that whatever happens in the future, "It is difficult to predict exactly what will emerge from the confluence of electronic media and communication devices" (Davenport, 2004: 162). She envisions that the "consumer will become a teller of tales by actively navigating through a database architecture filled with digital content" and that by "empowering consumers to create and shape their own content" consumers will become authors (Davenport, 2004: 162). Moreover of utmost significance is Davenport's assertion that "as we move towards a framework for synergistic media construction and exchange, the dialogue with, and appropriation of, story structure becomes a critical gate to the fluidity of the construction process" (Davenport, 2004: 162).

In investigating the efficacy of the MIT Interactive Cinema Group's work it is worthwhile re-visiting Manovich's reflections regarding the term "interactive narrative". Overall Manovich considers that the term is overused in discussions of new media and he notes that this term is generally used to describe a number of database records linked together to enable the user to follow more than one pathway. However, Manovich is correct when he notes that such a concept of interactive narrative is inadequate: "the author also has to control the semantics of the elements and the logic of their connection so that the resulting object will meet the criteria of narrative" (Manovich, 2001: 228). Manovich also considers as erroneous the notion of users constructing their own unique narrative by choosing elements from a database in a particular order. He notes, "If the user simply accesses different elements, one after the other, in a usually random order, there is no reason to assume that these elements will form a narrative at all...why should an arbitrary sequence of database records, constructed by the user, result in 'a series of

connected events caused or experience by actors’?”(Manovich, 2001: 228). He adds, “A database can support narrative, but there is nothing in the logic of the medium itself that would foster its generation” (Manovich, 2001: 228).

Manovich’s musings highlight the fact that, as does the Interactive Cinema Group’s work, and as does Aristotle (*Poetics*, Section 1, Part III: 2), it is the author who must conceive of and specify the elements and potential pathways of narrative if one is to be assured that what is “deemed” narrative in new media is indeed so. Moreover this recognition of the vital role of the author places emphasis on the importance of designing the search engine to guide the interactive narrative experience.

3.5 The Interactive Guide – The Search Engine and the Search for Dramatic Design

The search to design dramatic human-computer interaction is specifically addressed in Brenda Laurel research. Laurel’s *Computers as Theatre* (1993) presents a contemporaneously innovative and dramatic theory of human-computer activity based on the author’s design of the audience’s potential interaction with the computer in the creation of interactive software. Laurel aims to provide a metaphoric model of human-computer interaction steeped in the traditional Aristotelian dramatic anatomy of rising dramatic action, to approach the way the user could interact with a program (Laurel, 1993: 20). In the closing chapters of her text Laurel refers in more detail to the thesis of her doctoral dissertation which has been influential in new media narrative research:

The task I set for myself was to determine how to go about building a system that would enable a person to participate in a dramatic action in a relatively unconstrained way, influencing the events and outcomes through his or her choices and actions as a character in the action...It must create incidents in the action, based on what the human and computer-based characters do, in order to create a whole action with a dramatic shape (Laurel, 1993:135).

Laurel’s goal was to “suggest ways in which we can use a notion of theatre, not simply as a metaphor but as a way to conceptualize human-computer interaction itself” (Laurel, 1993: 20). Central to Laurel’s thesis was the way in which she differentiated between a computer program and a theatre script:

An apparent difference between programs and theatrical scripts is that programs are not intrinsically linear in form, while scripts generally are. At the highest level, this non-linearity means that programs can cause different things to happen depending on the actions of their users. The way in which computer functionality differs from dramatic action is that some portion of it is shaped by a person as the action unfolds; that is “authorship” is collaborative in real time (Laurel, 1993: 45).

Of particular importance is the fact that in her proposal for creating dramatically engaging experiences, Laurel aptly noted the importance Aristotle placed on end cause or catharsis – the arousal and expression of a particular set of emotions in the audience (Laurel, 1993: 36 – 55) and the traditionally accepted interpretation of Aristotelian dramatic anatomy – a concept based on the accelerating dramatic action of exposition, inciting incident, escalating complications leading to climax, and ultimately resolution (Laurel, 1993: 94).

However, Laurel’s theory, although impressive, is not without its flaws. *Computers as Theatre* did not present a theory of the development of the actual design of a computer program, but a proposal for a structure underlying the program. In proposing what has become an influential model in new media storytelling (Mateas, 2002: 26) Laurel is fundamentally in error. Laurel has indicated that Aristotle placed equal importance on all elements of drama to give emphasis to her translation of Aristotle’s “spectacle” as her term “enactment” as a means of personal interaction for the audience and an integral and equally important part of dramatic tragedy. On the contrary Aristotle was adamant that it is the interdependence of the key factors of character, thought and action that creates causality and determines action, for Aristotle the most important part of dramatic tragedy. It is the other factors of language, song and spectacle, together with character, thought and action that determine its quality (*Poetics*, Section 1: Part VI: 5). Overall it would seem that Laurel moulds her interpretation of the *Poetics* to suit her ends. For example, Laurel skims over her inability to locate the visual as a component of Aristotle’s hierarchy of the six qualitative elements of drama by saying, “As scholars are wont to do, I will blame the vagaries of translation, figurative language, and mutations introduced by centuries of interpretation for this apparent lapse and proceed to advocate my own view”

(Laurel, 1993: 55). While Laurel's model is useful, it operates on a basic misconception and the assumption that the vagaries and mutations of translation over the ages have failed to provide the point of view advocated by the theorist.

In new media theory, however, Laurel's flawed model has become very influential. For example, Michael Mateas (2002) builds on Laurel's model and use of the term "spectacle" as "enactment" in his PhD, *Interactive Drama, Art and Artificial Intelligence*, by adding Janet Murray's concept of "agency" at the level of character and "user action". However Laurel's comments regarding the analysis and study of the emerging art form of interactive media provide much fodder for research thought:

Neither participants nor authors have ultimate control over the shape for interactive experiences; form and structure emerge as artefacts of complex, asynchronous collaboration. Exploring the dynamics of emergent form will lead us to new, more appropriate ways to approach design (Laurel, 1993: 212).

In their attempts to find more appropriate ways to approach to interactive new media narrative, the Oz Group at Carnegie Mellon University has attempted to create systems that a writer could use to tell stories that would include a user, a story world, computer based characters with Artificial Intelligence, and a story controller that would shape the experience from the user's perspective (Murray, 1997:202). Michael Mateas (2001) has developed the concept of an interactive story which sees the user interacting with interactive content. His "A Preliminary Poetics for Interactive Drama and Games"(2001) is worthy of detailed discussion for a number of reasons. Mateas' project notes, "Part of the difficulty in achieving interactive drama is due to the lack of a theoretical framework guiding the exploration of the technological and design issues surrounding interactive drama"(Mateas, 2001: 1). Borrowing from Laurel, he refines a theory based on Aristotle's dramatic theory, modified to address the concept of interactivity interpreted as the first person concept of "agency" in Murray's aforementioned phenomenological categories of immersion, agency and transformation (Mateas, 2001: 1).

Mateas' interactive drama, *Façade*, is a 3D animated domestic drama set in a single room, in which a couple, Grace and Trip, invite “the player” (the user or audience) over for dinner. During the course of the evening the façade of the apparently model relationship of this couple crumbles when Grace confesses to the player that she has fallen in love with him. The three potential narratives in *Façade* each take the player fifteen to twenty minutes to complete. *Façade* is a character based relationship drama rather than being about “manipulating magical objects, fighting monsters, and rescuing princesses” (Mateas, 2005a: 3). *Façade* involves three characters – two controlled by the computer and one controlled by the player as protagonist. In his concern with the physical nature of interactivity and the player's impact on the story trajectory, Mateas asserts that agency or involvement in the drama must involve a significant action that impacts upon the story rather than random movements in the virtual world (Mateas, 2001: 2). According to Mateas, in an interactive drama the player has a significant influence on the events of the story itself. A full appreciation of the possibilities of the story requires the player to play out six or seven non-linear trajectories. The goal of this prototype of interactive drama is to create “an architecture that affords the authoring of non-linear, player responsive narrative performed in real time, and implementing a small but complete, high agency interactive drama within that architecture” (Mateas and Stern, 2005a: 3). In effect Mateas aims to create an interactive story experience that provides the viewer with the agency to affect the plot of the story, yet has the feel of a traditional dramatic experience (Mateas and Stern, 2005a: 2-3).

Façade is situated in a “simulated world with real-time 3D animation and sound, and offers the player a first-person, continuous, direct-interaction interface, with unconstrained navigation and ability to pick up and use objects...A player has agency when she can form intentions with respect to the experience, take action with respect to those intentions, and interpret responses in terms of the action and intentions; i.e. when she has actual, perceptible effects on the virtual world” (Mateas and Stern, 2005a: 3). While Mateas and Stern acknowledge that most games provide interaction in terms of, for example, shooting, running, or scoring points, they contend that to date “a high agency” interactive story has yet to be built.

Such an authoring tool would substantially increase the possibility for artists with minimal programming skills to help build high agency interactive dramas. Short of that developers with significant aptitude and experience in programming, dramatic writing and game design will be required, of which there are currently few (Mateas and Stern, 2005b: 6).

Overall Mateas' approach validates a number of the key issues regarding interactive drama as addressed in this thesis – the role of the author in scripting interactive narrative, the importance of Laurel and Murray's theories to the development of contemporary models of interactive drama and the search for a structural model. However as with most projects originating in the university research laboratory, it appears that its major shortcoming is its focus on creating Artificial Intelligence and the enabling technology - the software design and coding needed to create agency or the physical sensation of the virtual world rather than the primacy of the story. Whilst not underestimating the complex and demanding task of creating this computer based drama, it must also be noted that as a narrative, Mateas' interactive drama *Façade* is as yet a basic drama which in Aristotelian terms (*Poetics*, Section 2, Part XIV: 10), lacks the dramatic engagement engendered by catharsis and in Formalist terms, lacks a considered treatment of the cinematic experience.

In conclusion, a consideration of the strengths and shortcomings of Brooks' *Agent Stories*, Mateas' *Façade* and Laurel and Murray's theories, reveals the current "state of play" in leading-edge research and theory in new media narrative and supports the central hypothesis of this thesis that the creators of interactive narrative software must come to terms with creating a theoretical framework for developing digital narrative. It also underlines the importance of turning to traditional dramatic and cinematic theory in recognizing the key essentials in the new media design process. For as Davenport notes the new media narratives of the research lab on the whole

lack any real sense of story, although the types of activity they support are certainly conducive to the telling of tales. Storytelling involves more than just setting intelligent, semi-autonomous characters free to roam about in a synthetic setting. Similarly, one cannot massage any bland occurrence into a good story merely by changing camera perspective, moving freely about in space and time, shifting among

various characters' points-of-view, and tracking the development of specific events or themes. To tell an interesting story, the story engine needs an agenda to pursue: that agenda must be designed to trigger palpable emotional responses - reverie, fear, curiosity, paranoia, love, etc. - in the audience (Davenport, 1997b: 6).

3.6 Creating the Impetus to Interact - Interactive Drama and the Lean Forward

Experience

The emotional responses of “reverie, fear, curiosity (and) paranoia” that Davenport (above) regards as being essential to the new media narrative storytelling agenda recall Aristotle’s insistence that dramatic poetry should invoke “pity and fear” (*Poetics*, Section 2, Part XIII: 9) in order to create engagement and facilitate the emotional response of catharsis. In the new media narrative arena of interactive television (iTV) the imperative to create engaging stories and promote a response is a commercial imperative. The most innovative developments in “interactive” cinematic new media narrative can be found in the convergence of the computer, the Internet and either free to air or satellite television in the arenas of interactive drama and interactive television. Here interactivity has become known the “lean-forward experience” where one may “interact” by, for example, voting to eliminate contestants from reality programs such as *Big Brother* or *Dancing With the Stars*. In this scenario:

TV is no longer a lean-back experience. Audiences crave involvement. Give them a chance to lean forward and they will come and play. Sport, comedy, reality and lifestyle shows all lend themselves to interactivity. Really, only dramas are immune, and even dramas have subtle ways they can invite the viewer to be involved (Jackson, 2003).

One of the most dramatically compelling exemplars of the iTV genre is the United Kingdom’s interactive drama *Online Caroline* (a web cam drama formerly at www.onlinecaroline.com). In this instance narrative engagement and hence cognitive as well as physical “interactivity” is effected by logging onto the *Online Caroline* site and developing an email friendship with the fictional Caroline. Caroline is the protagonist of this 24 part online drama which is presented via pre-recorded web cam sequences and emails hosted on the *Online Caroline* website. Once a viewer logs onto the site, signs up

and establishes a “friendship” with Caroline, Caroline regularly emails to seek advice about how she should deal with her increasingly troubled and sinister relationship with her boyfriend, David. In the final week of the serial Caroline appears to have been imprisoned and silenced by her boyfriend as the result of a bizarre experiment with his employers, XPT.

It can be easy to become dramatically engaged and personally involved in the drama of *Online Caroline*. In her unique article published on the web site and by MIT, Jill Walker writes of her interactive experience with the *Online Caroline* web and database of recorded video clips. Walker’s essay is quoted at length:

Online Caroline is a story told to and, importantly with, its reader. It’s built around a database that collects information I feed it as I read. I answer questions about myself and the program uses that information to generate personalised emails from Caroline to me. When I visit Caroline’s web site the version I see depends on how much of the story I’ve read. Each day I’m limited to one episode consisting of an email and the appropriate version of the web site. In addition to the daily web cam segment, the web site regularly updated the diary section similar to a web diary or personal home page. It takes me a minimum 24 days to experience the drama, though I’d take longer if I visit the site less than daily...

Caroline watches me as much as I watch her in this fiction. I have a clear role in the story, as I would in a computer game. There is no space for me to act on my own initiative in *Online Caroline*. I can only speak when spoken to, and the allowed responses are few. My role is that of the confidante. My function is simply to allow the heroine to speak. As the story progresses, however, I realise that the program knows more about me than I have deliberately told it...

Another place I can speak up is in the “You decide” box that appears underneath the web cam image each day. On the eighth day...I can choose between three options by clicking on the appropriate box: “Tell David”, “Avoid David”, or “Leave David”...Whatever choice I make the web page refreshes to show me the same sentence: “You need to know more about David, I think”...

My actions as a reader don’t just evoke a response from the text, they seem to affect the story, even to make me complicit in what happens... Following this serial doesn’t feel like “just watching” or “just reading”. It feels as though I may be partially responsible for

what's happening in this simulated world...

My relationship with Caroline is defined by its impotence. She can ask me for help but there's no way I can do anything what will really change her story. And yet I'm left feeling responsible for her fate...

Don't think I haven't noticed how oddly David is behaving, by the way. The question is: what can I do about it? I mean what can WE do about it?

What I'm trying to say is – don't just sit there. HELP ME OUT HERE!! (Email no.19)

When the story is finally over, Caroline is unable to send more emails. Instead, I receive a thank-you email from the president of XPT, the company David works for. The email seals my guilt, leaving me feeling that perhaps I could have saved Caroline from her fate had I made different choices in what sounds more and more like a game...

I'm not in charge of reading *Online Caroline*. I'm not a disinterested reader or viewer. I'm involved. This is a simulation, and simulations make their audiences participants...

My explorations through the text make me feel as though I have choices and I am in control. The narrative seems to adjust itself to my actions and responses. .

I'm told what happens in this story, I don't discover it. I'm not active. I'm not in control. The text I'm reading is the active party here...

(Walker, Jill @<http://jilltxt.net/txt/onlinecaroline.html>. Accessed 18 March 2005)

In the process of research the author of this thesis also logged onto *Online Caroline* in early 2005 and immediately became involved in an email relationship with a new web based email virtual friend, Caroline. Like Walker it was easy to become quickly intrigued by and emotionally engaged with Caroline by interacting with her in her plight. In Aristotelian terms one was absorbed in the drama of her life and moved "to pity and fear" (*Poetics*, Section2, Part XIII: 9). In response to her emails and fragments of web cam drama, one is enticed into interacting by advising Caroline on what she should wear and how she should interact with David. However unlike Walker it was easy to become anxious. The feeling of giving away too much personal information to Caroline and cyberspace quickly overtook the feeling of empathy and engagement. In essence it felt like

“Big Sister” was watching. All correspondence with Caroline was deleted from the computer in an attempt to escape or avoid interacting with the characters in the drama. Such is the power of the emotional and cognitive “interaction” that one experiences in the *Online Caroline* interactive drama, that it was impossible to forget the interaction. One still wonders what would have happened had one stayed online... This Orwellian experience is perhaps concrete evidence of Manovich’s observations about the most powerful or only “true” form of interactivity – that of the telepresence of the military simulator (Manovich, 2001: 164-167) and his assertion that true interaction is found in teleaction (Manovich, 2001: 167).

The interactivity of *Online Caroline* is an engaging experience because of the dramatic properties of the story. The intense emotional commitment to the story afforded by the friendship developed with Caroline and the desire to help her in her dilemmas offer a real sense of agency and thus engender a cause and effect trajectory. The viewer can truly influence the outcome of Caroline’s dilemma for the viewer’s experience has been carefully orchestrated to fit into the classic three act dramatic structure. At crucial points in the drama, what would be termed turning points in a feature film or television series, one is offered the chance to help Caroline.

While interaction and emotional engagement in *Online Caroline* are effected by email questions and responses which then “help” Caroline make her decisions through a pre-recorded web based database of information, interaction in Australia’s first interactive online drama *Love Cuts* (1998) is enabled by the editing of the story content by the user or visitor to the *Love Cuts* web site. *Love Cuts* was produced by NIDA (National Institute of Dramatic Art) in conjunction with the AFTRS (Australian Film Television and Radio School) and hosted at www.nida.unsw.edu.au/interactiveprojects. *Love Cuts* was a broadband project part funded by DCITA and developed to stimulate discussion between film, television and new media industries to explore the possibilities of interactive drama (Jacka, 2000: 79). The viewer of *Love Cuts* has significant power to interact – to make a change or a difference in the “narrative” by visiting the web site in the role of editor of the database of fixed segments of narrative material available on the site. The viewer

accesses the *LoveCuts* web site, clicks the “Heart Starter” button and enters the world of *LoveCuts* to arrive at the video edit suite. Immediately the viewer is enveloped in the first act of a traditional Aristotelian drama or the exposition of a film. The viewer’s newly married friends, Steve and Dominica, harangue the viewer (as the editor of their recent wedding and honeymoon footage, to get them to re-edit and re-interpret their stormy marriage break-up).

The streamlined editing interface allows you to quickly choose from the wedding, reception and honeymoon, scroll down the clips from each and view a clip in the player window and drag the clips you select onto the timeline to make your video. As you work, Steve and Dom bombard you with videophone messages and emails reacting to your choices and trying to make you see things their way. When you have the clip you want on the timeline you click the “finish movie” button, choose a title and admire your handiwork as it is presented on the screen. Your video has the power to change their lives. Steve and Dom are watching and they will react to what you’ve done (www.lovecuts.com.au/about.html. Accessed 18 March 2005).

Love Cuts represents a quite significant step in the development of interactive narrative. It achieves its power by the primacy of the cinematic environment and the acknowledgement of the power of the “cut”. Interaction in the instance of *Love Cuts* activates the associative power of montage and the narrative and aesthetic relationships of the cinematic form theorised in Formalist film theory.

Interactivity as an experience that involves more than the response to a situation or a database of material, is found in the Australian multi platform drama series, *Fat Cow Motel* (2003) (www.fatcow.com) (In this case the media of television, satellite, the web and the mobile phone were the delivery platforms). *Fat Cow Motel* was billed as Australia’s first interactive multi-platform crime drama to be broadcast via satellite. It was a thirteen part drama series that was eventually broadcast and interacted with via the multi-platforms of the ABC television network, the *Fat Cow Motel* website, SMS text messaging, voicemail and email. Developed by the Brisbane based production company, Hoodlum Entertainment, *Fat Cow Motel* was an interactive crime mystery which set out to solve the unexplained death of an aging rock star whose body is found in a Fat Cow Motel room. The format for each episode followed the traditional Aristotelian dramatic

three-act structure, ending on a cliff-hanger for each episode. However in the case of *Fat Cow Motel* the audience couldn't alter the narrative. They could watch the show as a straight television drama series, or choose to become involved in solving the mystery by using clues imbedded in the program, going online to access various websites and intercepting SMS and email messages between characters. Although the "interaction" itself was really post related to screened story events, the subsequent involvement of the audience as "sleuths" in solving each week's clues was an innovative and significant step in the development of interactive television and new media narrative in Australian television. In a 2002 PFTC (Pacific Film and Television Corporation) seminar the producers, Hoodlum Entertainment, insisted that the story was the most important element of the production. For Hoodlum Entertainment, the focus was on the characters and the narrative and how it "played out". Their strategy was to keep the technology requirements simple - not to have the audience requiring too much detailed technology. Hoodlum Entertainment stressed that their idea of interactivity meant that the audience chose its level of involvement rather than choosing to follow a pre set story path (Robertson and Mayfield, 2002: Unpublished workshop address).

The innovations in interactivity that these prototype programs *Online Caroline*, *Love Cuts* and *Fat Cow Motel* address to a greater or lesser extent, the treatment of the features of cinematic narrative canvassed in this chapter – non-linearity, interactivity, immersion, agency and complex narrative structures is commendable. There is no doubt that both *Online Caroline* and *Love Cuts* demonstrate the development of non-linear narrative in the multi platform digital environment. The storyline of *Online Caroline* can proceed in a number of different - although preset - pathways seemingly dependent on the advice that the audience gives in response to Caroline's dilemmas. The story of *Love Cuts* may also proceed in a number of directions depending on how the visitor chooses to edit the narrative data which is presented via the video clips hosted on the *Love Cuts* website. All three stories enable interactivity. *Online Caroline's* interactivity is effected by email, *Love Cuts'* interactivity is effected by editing and *Fat Cow Motel's* interactivity is effected by both email and mobile phone text messaging. *Fat Cow Motel* demonstrates the interconnecting structuring of narrative typical of a television series where a number

of stories – usually the “B” and “C” plots - involving different characters play out whilst the “A” plot – in this case the solving of the murder mystery – is resolved. All stories create a sense of dramatic agency. *Online Caroline* involves the audience as a friend who has an important role to play by giving advice via email to Caroline. *Love Cuts* involves the audience as an editor who decides how the story will be resolved depending on how they decide to edit the wedding video. *Fat Cow Motel* involves the audience both as friend and sleuth. On the one hand the twins who are characters in the drama, email the audience confiding secrets, and on the other the audience may vote to say who they think committed the murder. In terms of the artistic techniques of cinema however these programs fall short for a number of reasons which are not necessarily a reflection of the director’s control of the cinematic but rather a result of the technology and production budgets available. The web-based drama *Online Caroline* demonstrates the most basic of cinematic techniques, as it is essentially a collection of graphics, text and video clips. The material of *Love Cuts* is stylishly presented yet the decisions that the editor is able to make are based solely on plot and not on aesthetics. *Fat Cow Motel* was screened as a television series and as such demonstrates a sound application of the techniques of visual storytelling combined with a well composed and aesthetically appropriate web site but most of all it presents a compelling story in the genre of the murder mystery.

In all these instances the vital ingredient is the story. In the interactive genre of iTV interactivity is effected as a dramatic and significant part of the story. In the university research lab interactivity as generated by the machine is a demonstration of the potential of the technology. However none of the new media stories considered above consider the important cinematic properties of the story as part of the interactive process.

3.7 Playing a Part in Narrative - Audience Interaction and “Being There”

In the previous section interaction in the new media environment was overviewed primarily in terms of non-linearity and the dramatic implications of audience involvement in interactive drama. In this section interactivity is discussed in terms of the concepts of psychological immersion in an illusory world and physical agency or interaction in a computer-simulated world. Two of the key features of narrative that have been outlined

in this thesis as central to the existence of narrative are the establishment of a fictional world governed by spatial and temporal verisimilitude and the experience of agency (Cook, 1985: 216). In cinematic narrative this fictional world is effectively built by the director in terms of the processes of cinema itself – the rendering and capturing of time and space via cinematography, mise-en-scene, editing and sound – that are the creation of the lens mediated reality that the viewer experiences in chronological time.

In the virtual 3-D world of new media narrative this illusory world is “physically” actualised either in a simulated interactive space, or by interacting with this space in some way. As noted above Murray theorizes that “agency” is enacted by either metaphorically entering a virtual 3D space or “holodeck”, or via an assuming the role of an avatar in a computer game (Murray, 1997: 113). The computer generated 3-D world or “holodeck” as theorized by Murray purports to offer direct viewer involvement or participation in narrative via the concepts of “immersion, agency and transformation” (Murray, 1997: 181). The question relevant to this thesis is how does the agency experienced in a virtual world affect the way new media narratives are designed – in effect, how does this particular illusory creation of reality impact on the form and structure of new media narrative told in this environment?

This question is addressed via the examination of the experience of agency as a form of direct user engagement created in the virtual world of a digital installation and in the playing of the computer game. There is no doubt that the experience of agency in these worlds differs from that of film because rather than “viewing” the audience is “doing”. However, as Manovich points out (Manovich, 2001: 167) and Formalist film theory serves to illustrate (Eichenbaum, 1927: 55), it is questionable whether the physical experience of reality is the key imperative for the telling of a story.

3.8 New Media Narrative and Building the Fictional World

In *The Language of New Media*, Manovich addresses the issues of reality and illusion in terms of the computer or the “digital illusion generator’s” quest to echo the photo-

realistic nature of the analogue generated image. This is manifested in the field of computer graphics and virtual reality (VR) research (Manovich, 2001: 177). While Murray theorizes about the potential existence of the holodeck and the interaction it could promise – in essence the concept of “being there” - Manovich more tellingly conceives of the virtual world of new media forms like the “virtual interactive 3-D space employed in computer games, motion rides, VR, computer animation, and human- computer interfaces” as a “navigable space” (Manovich, 2001: 214-215). Although Manovich asserts that virtual 3-D space is a key form of new media (Manovich, 2001: 214), he equates the process of narrative experience as the actual travelling through time in this space rather than being immersed in the space. He then uses this idea to build an argument for the importance of this movement as a means of portraying narrative action rather than just mere representation (Manovich, 2001: 216).

In proposing this idea, Manovich considers the part narrative has to play as a spatial journey in computer gaming, for example in the game, *Myst* (Cyan, 1993) where the player must travel alone to explore a mystical island. To proceed and solve the unknown puzzle in *Myst*, the player must use any clue – a scrap of paper, or an ambient sound, for example, to unravel a number of secrets or complete a number of challenges. Manovich considers that in *Myst* and in many computer games, “narrative and time itself are equated with movement through 3-D space, progression through rooms, levels or words” (Manovich, 2001: 245-246). This he notes is in contrast to the “psychological tensions between characters and movement through psychological space” (Manovich, 2001: 245-246). Manovich also equates this spatial journey with the way in which computer games recapture “ancient forms of narrative in which the plot is driven by the spatial movement of the main hero, travelling through distant lands to save the princess, to find the treasure, to defeat the dragon...”(Manovich, 2001: 245-246). Thus Manovich reaches the conclusion that the narratives of computer games are spatial narratives” (Manovich, 2001: 245-246) as they provide a space that the player may “move” through. In his consideration of navigable space, Manovich also considers the relation between the virtual and the real, in particular in the early work of MIT Media Lab and the work of Jeffrey Shaw. As Manovich observes, most contemporary designers of navigable

computer spaces use interactive 3-D computer graphics to construct their spaces. However in *Aspen Movie Map* (1978) the MIT group utilizes a set of photographic images in a simulator to model the real-life experience of driving through Aspen (Manovich, 2001: 260-261). Likewise Shaw in *Legible City* (1988-91) and more recently in *Eavesdrop* (2004), ties his representation to reality firstly by deriving the dimensional values of the virtual world from the city it represents and secondly by using live action video of real actors (Manovich, 2001: 261-262). However for Manovich, Shaw's work is of even greater importance because of the complex interplay of the techniques of representation and navigation in his work. In *EVE* (1993-present) and *Place: A User's Manual* (1995), Shaw uses the navigational methods of video, cinema, panorama and VR. In *EVE* the user finds him or herself inside a large semi-sphere reminiscent of a panorama upon which a cinematic image is projected (Manovich, 2001: 282).

Shaw's work deserves closer examination in its melding of interaction, virtual reality and the cinematic. Shaw is the director Australia's *iCinema* research institute (a joint initiative of the UNSW and COFA) whose research focus is the "cinematic reconstruction of televisual information" in interactive narrative. *iCinema*'s projects involve the design of enabling software to research the Interactive Narrative Systems, Immersive Visualization Systems and Theories of Interactive Digital Narrative Systems. In the research area of interactive narrative systems:

The central aim in this area is the inquiry into theories of narrative and the organization of units of meaning within the digital domain. A significant conceptual problem posed by this area is how to theorize the types of narrative and meaning emergent within digital space. These theorizations will need to transcend the narrow focused concepts of non-linear narrative derived from conventional literary and cinematic theory (http://www.icinema.unsw.edu.au/ic_research.html#research_narrative)

iCinema's research projects on interactive narrative propose to investigate the role of interactive narrative in the cinematic presentation of televisual information (Del Favero, Brown, Shaw and Weibel, 2005: 1) *iCinema* openly acknowledges the value of narrative and the paucity of research in the area of narrative and digital cinema. Shaw's work is of particular interest as the new media narrative, *Eavesdrop* (Pledger and Shaw, 2004), for

example, is a digital installation which combines cinematically projected images within a virtual panoramic world. According to Pledger and Shaw, *Eavesdrop* is a “multi-narrative mediation of psychological states in and around the theme of moral inertia” (Pledger and Shaw, 2004: 1). This interactive narrative virtual installation (installed at the Queensland University of Technology in September, 2004: 1) is a 360-degree purpose built cinematic environment where “the characters are caught in a loop wherein they are doomed to repeat a certain nine minutes of their lives” (Pledger and Shaw, 2004). In this scenario the audience or user/viewer stands on a rotating platform inside a large circular screen upon which are projected freeze frames of characters stalled in a short cinematic narrative loop. These images may be activated by the user via a lever similar to a computer mouse which allows the viewer to zoom-in and click on the frozen frame and view or review the narrative loop. Interactivity in *Eavesdrop* is thus equated with re-starting a stalled narrative loop and standing within a larger than life size virtual panorama. As an experiment in virtual interactivity *Eavesdrop* is unique and of interest, but as an experiment in new media narrative it is limiting as the same basic narrative is played over and over.

An examination of Pledger and Shaw’s *Eavesdrop* serves to validate the assertion of this thesis, that the creation of narrative in virtual 3-D space as a narrative form, while innovative and interesting, should always be subservient to the structural and formal parameters of cinematic narrative. The narrative experience of immersion and agency as realized in the virtual world installation of *Eavesdrop* is a commendable idea but the narrative so experienced has limited potential. There is no doubt that the viewer experiences immersion – he or she is standing on a platform in the centre of a 360 degree panorama of projected images – in effect “frozen” vignettes of narrative “potential”. These vignettes are “activated” (that is the video clip starts to play) by the viewer allowing him or her the opportunity to “eavesdrop” on the action of the cinematic narrative clip playing in the direct line of sight. There is no doubt that narrative is “experienced” if agency means being present in an immersive panorama. However it is questionable whether true agency is engendered in the process of “eavesdropping” or viewing and thus listening to a conversation which commences when the viewer chooses

to activate the frozen image of the stalled conversation. What happens when one eavesdrops? How does one become dramatically involved in a repetitive vignette of action? In its efforts to date, *iCinema's* research into interactivity in the narrative environment has been centred on the creation of a virtual cinema, rather than narrative structures. This concern with the “simulatory” is in effect a concern with the technological which Shaw and his collaborators deliberately criticise as being a hallmark of the research of most new media theory at the expense of cinematic narrative (Brown et al., 2003: 1-4).

3.9 Agency in the Fictional World

It would seem appropriate at this point to contrast the agency of a virtual world such as *Eavesdrop* with what Manovich proposes as representing “true” agency as engendered in his examination of the military simulator and the phenomena of “telepresence” (Manovich, 2001: 164-165). Essentially for Manovich, Brenda Laurel’s (1993) definition of “telepresence” provides the two dimensions of “presence” at a distance. Laurel defines telepresence as “a medium that allows you to take your body with you into some other environment... that may be a computer generated environment, it may be a camera-originated environment, or it may be a combination of the two” (Laurel, 1993 in Manovich, 2001: 165). For Manovich these two environments equate to computer generated virtual reality and being “present” in a real remote environment via a live video image. Manovich considers that telepresence is a much more radical technology than virtual reality or other computer simulations which are essentially dependent, for example, on head mounted gear to enable the user to experience the feeling of being present and able to control a simulation. For Manovich the use of live video broadcasts to control, for example, the act of bombing in military scenarios or the repairing of a space station, presents a “real” application of the importance of telepresence. He coins the term “teleaction” to encompass the attributes of this type of telepresence. Ultimately for Manovich this equates with real time manipulation of reality – we are able not only to “represent reality but also to control it” (Manovich, 2001: 167).

Manovich's conception of virtual interaction as the complete control of reality is quite radical. Yet he is correct. Manovich shows that the only real difference between the imperative of agency as part of the narrative experience as theorized on the one hand by Aristotle and Cook, and on the other by Murray, is that there is some form of physical interaction. The manifestation of physical agency in the case of a virtual world installation like Shaw's *Eavesdrop* (2004), where the viewer stands on a platform surrounded by a panorama of projected images is actualised by actually standing in the middle of a bank of screens configured in a circle. In a computer game like *Myst* where the player clicks the computer mouse to move around the screen or enter another dimension or level of the game, the agency is experienced by making the decision to click the mouse and select another part of the game. On the other hand in a film like *Raiders of the Lost Ark* (1981) this agency is psychologically engendered by the drama of the story and the elements of cinematic storytelling.

Agency and immersion in a fictional world as initially theorized by Aristotle and extensively theorized in film theory, entail the viewer identifying with the world and its characters. While it is beyond the scope of this thesis to review the extensive cinematic theory in this area, it is noted that film theory in its various guises works on the principle of the "psychological immersion" in a fictional world described by the early film theorist Bela Balazs:

For the new forms of film art born in Hollywood...the spectator does not regard the inner world of a picture as distant and inaccessible. Hollywood invented an art which disregards the principle of self-contained composition and not only does away with the distance between the spectator and the work of art but deliberately creates the illusion in the spectator that he is in the middle of the action reproduced in the fictional space of the film...

A more important, more decisive, more historical novelty was that the film showed not other things, but the same things shown in a different way – that in the film the permanent distance from the work fades out of the consciousness of the spectator and with it that inner distance as well, which hitherto was a part of the experience of art...

In the film the camera carries the spectator in to the film picture itself.

WE are seeing everything from the inside as if we are surrounded by the characters of the film. They need not tell us what they feel for we see how they see and see it as they see it... Our eye and with it our consciousness is identified with the characters in the film, we look at the world out of their eyes and have no angle of vision of our own. We walk amid crowds, ride, fly or fall with the hero and if one character looks into the other's eyes, he looks in to our eyes from the screen, for, our eyes are in the camera and become identical with the gaze of the characters. They see with our eyes. Herein lies the psychological act of 'identification'.

Nothing like this has ever occurred as the effect of any other system of art and it is here that the film manifests its absolute artistic novelty (Balazs, 1948: 48- 50).

Whilst Balazs' commentary represents a very early theoretical discussion of the power of film to envelop the viewer in an imaginary world, it is relevant to note that his concerns relate to the establishment of film as an art form during the early period of its technological development. Balazs observes that via the art of film there is the creation of "the illusion in the spectator that he is in the middle of the action reproduced in the fictional space of the film" (Balazs, 1948: 48). In fact from the beginning, film has created an imaginary world which transports the viewer into the story.

Manovich's proposal that involvement in computer games in terms of "narrative actions and exploration" makes eminent sense given that the above reference to Balazs represents a brief example of the extensive body of film theory regarding the psychological processes of identification and immersion. Manovich notes that this concept of moving through or exploring space is an essential feature of the narrative world of computer gaming because without this action by the player the game would stop. Ultimately Manovich proposes that in new media, "space becomes a media type" like other new media types – text, stills, audio and video - which can be created, stored, manipulated by and interacted with via the computer (Manovich, 2001: 251). If the phenomenon of virtual reality is to be contextualized in terms of the place it plays in the creation of narrative, it simply becomes the space in which the user or audience engages with or travels through the narrative, rather than the experience itself. As Balazs (1948), Bordwell (1985, 2001), and the Russian Formalists (1927) note, it is the complementary

interrelationship of both the narrative and the aesthetics of cinema that tells a visual story and creates a fictional world. Ironically it would seem that in the world of new media research it is an over concern with the creation of the virtual world at the expense of plot that has led to a lack of engaging storytelling.

The fascination of new media narrative research with the creation of virtual worlds, the experience of agency, immersion and interaction, despite being innovative and of novel interest, is in effect seeking to duplicate in a virtual sense what has already been created as a cinematic image on the screen. While the experience might be different, it is at the moment by no means engaging. In terms of the parameters outlined as essential to the creation of narrative it addresses: “the establishment of a fictional world governed by spatial ... verisimilitude and the centrality of the narrative agency” (Cook, 1985: 216) but it doesn't use these features to tell a dramatically engaging story. As yet the stories told in these virtual digital environments lack the complexity and aesthetics of cinematic storytelling. This is not to say that they won't become more complex and engaging. But it is to say that the basic paradigms of cinematic storytelling need to be addressed.

3.8 Creating a Reason to Interact - Interactive Narrative and Computer Games

The promise of physical interaction where agency is engendered by the real time experience of “playing the game” makes narrative in computer gaming the basic premise for a game's existence. In essence the computer game can be seen to use the concept of narrative as a shell for the games experience - it is less important than the actual playing of the game. The “narrative” in a computer graphic generated game such as *Grand Theft Auto: Miami Vice* (2003) involves performing complex driving feats through the streets of Miami whilst the more cinematic “narrative” in the computer game *Myst* involves the solving of a mystery by moving through a fictional world. Whilst it is not within the scope of this thesis to add to the debate, Mateas and Stern (2005a: 2) note that the long running discussion on the role of narrative in games has not resolved the issue as to

whether or not a computer game is a narrative. They note in particular that ludologists believe that games are rich in agency and that “while games can include narrative, explicit in-game narrative can at best only play a superficial role, eg as a largely linear layer on top of pure game play” (Mateas and Stern, 2005a: 2).

Despite this unresolved debate there is no doubt that narrative has a part to play in computer gaming. The concept of narrative as a shell for the games experience is well established in computer gaming, the dominant global market for interactive narrative in new media (Morrison, 2002: Unpublished conference paper). Historically, the greatest creative effort in digital narrative has been in the areas of “shoot’em’up” and “puzzler” games which are characterized by simplistic plots where the hero must shoot or kill evil forces or solve increasingly complex puzzles. In the narrative of computer games, agency for the viewer essentially involves the physical interactive experience of driving or shooting in a basic narrative scenario which assumes the user plays the hero. This can be conceived of in terms of the “hero’s journey” as postulated by Joseph Campbell (1972). Here he theorizes that every story follows the basic format where the hero embarks on a quest to redemption whilst encountering a number of obstacles.

Narrative in computer gaming at this stage is relatively simplistic but that is not to say that narrative in this arena is to be dismissed. Additionally that is not to say that the parameters of narrative – time, space and causality - are not important but rather they are underdeveloped or uni-dimensional. Overall there is little dramatic experience in terms of becoming involved with narrative. Whilst commentators like Morrison (2002: Unpublished Conference Paper) note that more “drama” is needed to make computer games more appealing to a wider audience, in the creation of computer games the focus is on scoring points or building skills to reach the next “level” of the narrative. This then avails the audience of more opportunities to score points or build skills such as shooting, driving or winning money. For example, the game *Grand Theft Auto: Miami Vice* (2003), can involve the player in a number of scenarios or “missions” that may be completed. The player can either drive a car, boat, plane or helicopter through the streets, or up and

down the stairs and along the verandahs of buildings of Miami. Depending on how skilful the player is, he or she can score points and build a cash bank which allows the purchase of significant commercial or residential properties and the opening up of more and more difficult-to-negotiate areas of the city in which to test driving skills. Throughout the game the player is confronted with a number of experiences – distracting, frustrating or otherwise. For example, while driving the player can switch on the car radio and listen to some entertaining and catchy eighties' hits. On other occasions the player can answer the phone only to be harangued by a madman who won't hang up. On still other occasions when, for example, the player has parked their vehicle outside their mansion they may exit the house to find their car stolen or wrecked.

For the audience it would seem that interacting with narrative in a computer game ultimately provides little more than a sense of skill and accomplishment in terms of “bots” (robots) killed or scenarios smashed. One could ask whether narrative is merely a shell for representing games that deal mainly with shooting, capturing or out-manoeuvring an enemy. At this stage the dramatic features of interactive narrative story telling in the computer games genre are in their infancy in an industry where plots are facile and opportunistic. This sentiment is perhaps no better reflected than in this heartfelt comment by a games designer: “We don't write stories. We design games for use.... We shoot up aliens because they deserve it” (Morrison, 2002: Unpublished Conference Paper). In the final analysis narrative in games is one-dimensional and driven by the desire to master the skills of driving or shooting so as to progress to the next level of the game. This does not mean that a game is not engaging, rather it means that the story is not the imperative.

While Manovich does not comment on games in terms of the type of narrative told, he does make a number of interesting and original observations about agency or interactivity in games in terms of the rendering of time. Ultimately Manovich considers that “shooter” games such as *Doom*, *Quake* and *Tomb Raider* are more successful than interactive narratives such as *Wing Commander*, *Myst* and *Riven* because they engage the user in both perception and action at the same time (Manovich, 2001: 210). In the former, the shooting or driving game, the user is involved in a constant simulation, shooting or driving whilst reading the “readouts” about how their character is progressing. On the

other hand in the latter, the interactive narratives, the user is temporally oscillating between the “cinematics” and the interactive game play (Manovich, 2001: 210). It is interesting to ponder Manovich’s conception of the role of time in narrative particularly in the light of his comments regarding the Soviet Montage theorist Sergei Eisenstein’s creation of time as discussed in Chapter 5 of this thesis. For Manovich, time in a computer game is essentially the “marker” that divides the shift between the different experiences of the game – the oscillation between the sense of cinematic involvement afforded by the full motion video “cinematics”, and the sense of virtual involvement engendered by using the skills of shooting or driving in an animated environment activated by a mouse or external accessory such as a steering wheel (Manovich, 2001: 210).

In the narrative exemplar of the computer game, Manovich’s conception of interactive narrative as one that operates as the result of immersing the viewer in the “illusion” created by the narrative world is nothing new. The audience’s awareness of the “meta-realistic” aspects of narrative involvement in new media narrative – the fact that they are experiencing an illusion yet they accept this and become involved in the “narrative” of the game - parallels the traditional sense of immersion of the cinematic narrative experience. The audience is still involved in the narrative and the audience is still aware that what they are engaging with is a fictional narrative world. What is “new” though is the fact that the audience can directly influence what is happening in a physical sense in this case – driving or shooting.

To think about narrative in these terms is to think about it as a “spectacular” adjunct and not an imperative aspect of the new media narrative experience. This devalues the importance of narrative and the ability of designers to create more engaging experiences. While the games experience does involve an impressive and quite deliberate construction of agency it is, at least, one-dimensional. As Manovich observes, “agency” really means that for a player to complete a game he must execute an algorithm in order to win (Manovich, 2001: 221). For example, in a game the user is usually given a specific “heroic” task (the narrative goal or motivation) and the algorithm could be “kill all the

enemies on the current level, while collecting the treasures it contains; go to the next level...” (Manovich, 2001: 221). Manovich notes that “At one moment, the user might be analysing quantitative data; the next a search engine, starting a new application, or navigating through space on a computer game” (Manovich, 2001: 210). As Manovich recognises, this type of interaction, which he terms “cognitive multitasking”, requires the user to interact in a complex manner with the computer (Manovich, 2001: 210-211). To explain this notion, Manovich once again turns to the analogy of cinema, noting that in the case of the larger framework of the computer’s operating system, new media embeds “cinema-style illusions within the larger framework of an interactive control surface” (Manovich, 2001: 211). These are the cinematic or “cut” scenes which do not form part of the narrative but rather appear to be a place one “visits” to take a rest from the intensity of the game.

It would seem that in developing the concept of agency in new media narrative as exemplified in the computer game, cinematic narrative is really a “wallpaper” for other types of physical sensations that are still being explored as novel, for example, using the storyline as an excuse to kill more enemies or crash more cars in a sort of virtualised “dodgem cars” experience.

3.9 Theorizing New Media Narrative and the Representation of Reality

The previous sections detailed the primacy of the re-creation of reality and agency as a research focus in the new media arena. In the film arena the creation of reality is engendered by the techniques of film – cinematography, editing, mise-en-scene and sound. The creation of reality in the cinematic domain is integral to but not more important than the creation of narrative. It would seem obvious that the drive to visual fidelity as engendered in the desire to create realistic virtual or computer graphic worlds is somewhat ill conceived. It would appear apparent that in order to focus on effective storytelling in new media researchers would be better advised to concentrate on the story itself and the way it is dramaturgically and cinematically constructed rather than on the creation of a computer generated world.

To situate the creation of reality in either a computer game or a virtual 3-D world in the context of its place in the creation of narrative it is pertinent to conceive of it as one of the elements of drama – in fact it may be conceived of as the “spectacle” – a tool used by the artist to create the narrative world. Aristotle conceived of “spectacle” by way of “mode” of delivery or the world created by the medium of delivery. For example, Aristotle refers to the artist’s role in shaping spectacle as a mode of delivery when he asserts that its “production depends more on the art of the stage machinist than on that of the poet” (*Poetics*, Section 1, Part VI: 6). He refers to the part spectacle plays as an element of drama when he dismisses the notion of “spectacle” as being of primary importance, contending that spectacle for its own sake is not really the tool of the artist and is “dependent on extraneous aids” (*Poetics*, Section 2, Part XIV: 10), while asserting on the other hand that it has “an emotional attraction of its own” (*Poetics*, Section 1, Part VI: 6). Aristotle also notes the element of spectacle as a necessary but not the most important part of tragedy. Spectacle, in combination with the other five elements of drama, determines the “quality” of dramatic poetry (*Poetics*, Section 1, Part VI: 5).

In film theory the Russian Formalists contextualize the place of reality most aptly – not as the recreation of the real but as a means of thinking about the real – the place to host the fabula. The Formalists’ consistent focus was on the construction of art works which led them to a conception of literature and cinema as a system of devices and functions that told a story rather than provided a registration of reality. The Russian Formalists had similar concerns to those raised in this thesis about the representation of reality and its relationship to art in their consideration of the emerging art of cinema. The Formalists contended that what was portrayed on the screen should not be considered as a simple reflection of reality or re-creation of the real (Eichenbaum, 1927: 55). Consequently the moving images of objects and people constituted cinema’s material, just as Manovich contends that the language of new media is the material of new media. By material the Formalists meant the world of the story - the place that gives rise to the story - not the reason for the story to exist as would seem the case for new media narratives where the creation of the virtual world is paramount over story. For example, Eichenbaum

commences “Problems of Cinema Stylistics” (1927), his contribution to *Poetika Kino*, with this salient observation:

The arts, in and of themselves, do not exist as a phenomena [sic] of nature ... Specific elements of nature which have entered into the construction of man’s way of life become isolated and, subject to a particular culture, become the basis of one or another of the arts (Eichenbaum, 1927: 55).

In discussing the nature of the new media world Manovich asserts that the essential difference between computer generated and traditional photo and film images is that they are materially different (Manovich, 2001:180). In new media the visual representation of an object achieves the same realistic pictorial representation as old media but computer generated images are composed of pixels or represented by algorithms and mathematical equations. For Manovich this leaves the computer based cinematographic image with two “identities” – one that satisfies the demands of human communication and one that satisfies computer-based production and distribution practices (Manovich, 2001: 180). As noted above Manovich analyses the creation of the new media “illusion of reality” from the point of view of its machine-based software driven production, as well as in terms of the history of visual illusion. Manovich commences his consideration of the appearance of new media objects by discussing the digital drive to visual fidelity (Manovich, 2001:180). He notes the apparent “paradox of digital visual culture - that although all imaging is becoming computer-based, the dominance of photographic and cinematic imagery is becoming even stronger. But rather than being a direct, ‘natural’ result of photo and film technology, these images are constructed on computers” (Manovich, 2001:180).

According to Manovich theories of illusion in art and media deal only with the visual dimensions of art. Therefore he believes that the “reality effect” in new media depends on more than an object’s visual appearance, and he considers that a new theory needs to supplement existing theory to take into account the dimensions generated by other senses, in particular the bodily engagement in worlds simulated by VR (Manovich, 2001: 181). Manovich notes that illusionism in computer based games, motion simulators and VR construct the reality effect using other dimensions as well as visual fidelity. These include

active use of the body in a virtual world and the use of space, touch and movement in computer games and simulations such as action rides. Therefore according to Manovich, our concept of what constitutes an image is changed - “New media move us from identification to action” (Manovich, 2001: 183). The image is no longer something the audience looks at but rather something the audience “enters” into. “The image becomes interactive, that is, it now functions as an interface between a user and a computer or other devices” (Manovich, 2001: 183). In discussing the effectiveness of the creation of “the illusion of reality” in computer generated images, Manovich notes that the history of technological research and innovation can be accounted for in terms of its progression towards realism or “the ability to simulate any object in such a way that its computer image is indistinguishable from a photograph” (Manovich, 2001: 184). For Manovich the great achievement of computer-based imaging is the creation of the synthetic moving image – animation and interactive 3-D computer graphics – which he terms “synthetic realism” (Manovich, 2001: 183-184).

To discuss the nature of the “realism” of this type of moving image, Manovich returns to the theorising of realism in the cinema, in particularly Andre Bazin’s “The Myth of Total Cinema” and his “The Evolution of the Language of Cinema”; Louis Comolli’s “Machines of the Visible” and Bordwell and Staiger’s *Technology, Style, and Mode of Production*. According to Manovich each of these theorists see the technological drive towards the reproduction of a perfect photographic reality as a function of differing goals or ideologies (Manovich, 2001: 184 -185). Manovich considers this technological drive towards photo-realistic 3-D graphics in terms of Bazin’s notion of “total realism” and in particular he considers the importance Bazin places on deep focus cinematography. Here the spectator is allowed to experience all facets of the action “in depth” – on all planes of the image - via the camera’s large depth of field. In effect the image is not selected via the process of editing. The technique of deep focus when combined with, for example, the long take in the fireplace scene between Kane and Susan in *Citizen Kane* (1941) presents a particularly “realist” portrayal of the action. Manovich notes that in computer graphics the user can similarly explore the virtual space of a display from his own point of view.

Manovich also considers the progressive changes in computer modelling in terms of Comolli's idea that the audience accepts the development of new illusionist techniques and the displacement of the old in the continual sustaining of the "reality effect". Finally in Bordwell and Staiger's "industrial" terms (where the portrayal of reality is affected for example by the machinery of the studio system and a film is the product of a commercial investment) he considers that innovations in the technology of creating the illusion of reality in computer graphics are actually driven by commercial interests, the competitive desires of those in the software industry (Manovich, 2001: 184-191). He notes in particular however that these innovations ultimately are developed in the research departments of academic computer science departments (such as MIT) and leading computer companies such as Microsoft (Manovich, 2001: 191). Overall Manovich believes that the desire to achieve the photorealism of cinema still drives the computer graphics industry. This is indeed the case. Morrison (2002: Unpublished Conference Paper), for example, notes the many man-years involved in the computer games industry to create "realistic" computer animated games. In providing his original scrutiny of these differing "drives" to the re-creation of reality Manovich aptly theorizes an under-recognized and little questioned aspect of the creation of reality in new media narrative research. It would seem that the research agenda has been purloined by this quest to create virtual world for the telling reasons that Manovich details above. Indeed it would seem that this quest has been at the expense of the main reason why one would want to create this world in the first place – to tell a story.

If one were to understand the creation of a spectacular digital world as the equivalent to Aristotle's "spectacle" it is apparent that in Aristotle's dramatic terms it is subservient to the main business of the narrative – the telling of a dramatic story. Despite the role that spectacle has to play in drama, it must be emphasized that Aristotle at all times considered that the spectacular features of drama should be subservient to plot, particularly in terms of the effect of the story on the audience for "the poet is guided in what he writes by the wishes of the audience" (*Poetics*, Section 2: Part XIII: 10). Aristotle contended that "Fear and pity may be aroused by spectacular means; but they may also result from the inner structure of

the piece, which is the better way and indicates a superior poet. For the plot ought to be so constructed that, even without the aid of the eye, he who hears the tale told will thrill with horror and melt to pity at what takes place ... But to produce this effect by the mere spectacle is a less artistic method” (*Poetics*, Section 2: Part XIV: 10).

It is obvious that Manovich’s assertion that by “redefining the very concepts of representation, illusion, and simulation” that “new media challenge us to understand in new ways how visual realism functions” (Manovich, 2001: 198) is justified in terms of the creation of a “story world”. However just as Manovich’s quest to uncover the most important factors influencing the re-creation or representation of the real in new media storytelling leads him to consider other the techniques of cinematic representation including the frame, the mobile viewpoint and montage, the answer lies in the cinematic. Manovich, in line with the Formalists’ complementary assertions (although this is not acknowledged by Manovich himself), notes that in terms of the rendering of the temporal and in terms of the mise-en-scene “editing, or montage, is the key twentieth century technology for creating fake realities” (Manovich, 2001: xvii).

The creation of a fictional world must be viewed as being at the service of story. The reason this world exists is to provide a milieu for the action of the story. As Aristotle notes in his *Poetics* it is via action that a story happens (*Poetics*, Section 1, Part VI). As has been demonstrated in, for example, the new media installation *Eavesdrop* (2004), although a world may be created in which one may immerse oneself, unless there is structured action in terms of the events of narrative, there is no story. The creation of reality is important but it is not of the magnitude of importance that it has been given in much new media research. To understand why this is the case and why the form and structure of cinematic story are such a vital consideration for new media storytelling, new media narrative forms that do use the features of cinematic storytelling in a digital environment are considered in the next section.

3.12 Getting into the Picture: Interactivity, Non-linearity and the Cinematic Mode

The new media artist, Megan Heyward’s work provides one of the main examples of new media narrative that is both cinematic in material and style. Heyward records the

vision for her story on video and then creates an interactive new media object using multimedia software (Heyward, 2002: Unpublished interview). While Heyward specifically addresses the potential for interactive storytelling in the digital domain, the story itself is paramount. Heyward states:

I'm interested in those stories where everything slows down, when narratives decelerate, and where there are many possibilities. Like multiplicity, wrong turns, or digression, or denial, hesitation, uncertainty... I'm interested in stories that don't go to a neat resolution, and allow for that sort of playing around and struggle before you make progress... I'm interested in those stories that – this is wrong from a classical narrative point of view – start in the middle of the crisis, where you have someone who is essentially paralysed, and you have to help them out of there (Heyward, c2000: 3).

Heyward designed her first narrative for new media, *I am a Singer* (1997) specifically for an interactive format. It was showcased in the new talent pavilion at MILIA, the international multimedia trade fair held parallel to MIPCOM at Cannes every year. *I am a Singer* is concerned with notions of identity, memory and culture. The basic premise involves Isabelle Jones, an emerging Australian pop star who loses her memory as a result of an accident on the eve of a U.S. tour. Although Jones knows what her name is, she does not understand “who” she is apart from the media representations of her public persona. In a game-like scenario, with the help of the user she attempts to reconstruct her identity and find her real self under the public mask via trawling through various sources – media reports, anecdotes, diaries and dreams. The user is offered three pathways for exploration in their quest as the singer. One pathway offers media representations, another pathway – a travel pathway – offers diaries and anecdotes and memory fragments triggered by various locations and the third pathway offers free association, analysis and dreams. As a new media narrative *I am a Singer* represents an elegant hybrid of the cinematics of film as presented in the QuickTime videos embedded in the interface, and the tree-branching structure of the three separate back stories of the singer's life as represented via the media reports, the diary and dreams.

Heyward's later work, the “interactive non-linear narrative” *Of Day, Of Night* (2001), is even more sophisticated. *Of Day, Of Night* is “a story of wandering” exploring the

“intersections of narrative, interactivity and the unexpected nature of the dream experience” (Heyward, 2001). In reality *Of Day, Of Night*, like *I am a Singer*, is a hybrid of a computer game, a classic narrative and an avant-garde narrative. The basic premise of *Of Day, Of Night* is that of a woman who has lost the ability to dream and wants to learn to dream again. To achieve this goal she sets up a series of creative tasks to attempt to “spark” the unconscious into dreaming once more. To engage with this narrative the audience is instructed to assume the role of the quasi computer game player who is availed of a map to assist in fulfilling various tasks. These tasks involve wandering through different locales including a market, a street, a river and a café, and collecting objects to enable the “player” to progress from day to night in the narrative. The narrative “instructions” include: “Later you will describe the objects reading fictional histories from their imagined past. Then you will arrange them into a cabinet – a dreaming space. Finally you will explore night – an environment of dreams where the objects and their stories come together in unexpected combinations” (Heyward, 2001). In the modus operandi of the computer game, the audience must complete tasks at a certain level – in this case during the day – before they can ascend to the next level – the night.

Heyward’s interactive dramas are perhaps the best realized of the cinematic interactive new media narratives surveyed in this thesis. They offer the audience or user an elegantly conceived non-linear narrative. In each story there are three trajectories that the audience may choose from. Choice is based on very real dramatic goals – in one the desire to find out one’s true identity and in the other the desire to reclaim a vital part of life – the ability to dream. Additionally there is a real sense of catharsis engendered by these dramas – one is dramatically engaged to feel the emotions of the hero in terms of the journey from exposition, through various crises to resolution. Finally in aesthetic terms Heyward’s work presents an artfully conceived interface much like a map which one follows to interact with the various narrative pathways.

However despite the interactive innovations and displays of non-linearity and interactivity in the examples of new media narrative discussed thus far, when contrasted

with the “interactivity” and complexity of cinematic narrative they “come off second best”. As Davenport (1997) points out in the new media environment:

All around us -- in the laboratory, in theme parks and museums, on CD-ROMs and home computers, across the World Wide Web -- stories are being transformed by technological possibility...A dynamically adaptive, interactive story can be likened to a shape-shifter which transforms its appearance by reconfiguring its component parts and perspectives...A ‘story with a sense of itself’ must possess thorough knowledge about its own parts, and it must be able to sense and respond to the desires of its audience. This requires a repositioning of the viewer, both psychologically and physically, from outside to inside the story form...The modern storyteller must construct her tale to best exploit the properties of the specific display and sensor technologies being used; at the same time, she must not forget that the audience’s appreciation of story depends as much upon the structure, form, and content of the narrative as it does on the technologies of display, channel, and interface... (Davenport 1997b: 1).

Davenport made these comments in 1997 but they are still as relevant a decade later. What Davenport fails to point out in this instance however is that the “the structure, form, and content of the narrative” upon which the story depends have been mastered in the cinema. To appreciate this situation an example of contemporary multi-linear cinema that demonstrates the non-linearity, interactivity, immersion, agency and complex narrative structures for which the new media researchers above quest is discussed below.

3.13 Old Media Storytelling – the Cinema

In recent years mainstream film has seen an increase in the use of complex narrative structures (Aronson, 2000a: 105) in films like *Pulp Fiction* (1994), *Magnolia* (1999) and *Memento* (2000). The complexity of narrative structure evidenced in these and other multi-linear narrative films has been theorized by the Australian researcher, story editor, writer and former AFTRS academic and scriptwriter, Linda Aronson (2000a) in her theory of parallel narrative structure. Aronson’s *Scriptwriting Updated: New and Conventional Ways of Writing for the Screen* (2000a) combines both craft and theory to develop a theory of writing for non-linear or parallel narrative structure based on Aristotle’s traditional three act narrative structure which provides the basic storytelling

goals of a suspense driven narrative, strong characters, meaning, unity and closure within a complex interweaving narrative structure. Aronson's thesis is that all the "new" parallel narrative forms "rely heavily on the traditional rising three-act model to create jeopardy, unity, pace, and closure in both their individual narratives and the film as a whole"(Aronson, 2000a: 106).

Aronson identifies four major forms of parallel narrative structure. She notes the familiar form of flashback narrative seen, for example, in *Citizen Kane* (1941) and in contemporary films like *The English Patient* (1996) and *Shine* (1996). Aronson also states that modern filmmakers:

Can run a number of distinct but connected stories, as happens in *Magnolia* (1999). They can tell stories in sequence, jumbled or from different points of view, as happens in *Pulp Fiction* (1994) and *Go* (1999). They can use an ensemble cast to depict a range of responses to one event, as happens in *American Beauty* (1999). Or ...they can combine a number of these alternate forms...(as) can be seen in a film like *Crimes and Misdemeanours* (1989), which combines flashbacks and parallel stories (Aronson, 2000a: 510).

It is worthwhile to use Aronson's theory to consider the art of cinematic narrative and the complexity of form and structure that is evidenced in cinema as compared to new media narrative. Quentin Tarantino's *Pulp Fiction* (1994) is perhaps one of the best-known multi strand narratives of recent years. It is a mystery thriller with an intricate collection of interconnected stories and plots where the main characters inhabit a world of drugs, crime and extortion. The main link between each story is the Vincent Vega character played by John Travolta. Vincent and his partner Jules are killers working for the crime lord Marcellus. The film tells the story of what happens when a number of mundane yet interwoven events like a date, a rigged fight and returning the boss's dirty laundry go awry. The film, *Memento* (2000), provides an even more complex exemplar of cinematic non-linear narrative. *Memento* is a mystery thriller that tells the story of Shelby (played by Guy Pearce), a man searching for the murderer of his wife. However Shelby has a rare disorder incurred since his wife's death – he cannot remember new memories. The director Christopher Nolan sets up what is in store for the audience in the opening shot where the metaphorical use of a Polaroid shot fading from fully developed to totally

blank symbolizes Shelby's dilemma and loss of memory. *Memento* then unfolds in chronological reverse and rewinds to the beginning, segment by over-locking segment in a spiralling crescendo of manipulated memories.

Perhaps one of the most appropriate exemplars of non-linear narrative in cinema is the German language film, *Run Lola Run (Lola Rennt)* (1998), which in effect represents what could be regarded as a hybrid between a computer game and a film. While *Run Lola Run* is a film, its opening sequence presents as a game - Lola is portrayed as an animated games-like character who sets off on the run from her home to save her boyfriend. Applying Aronson's theory of parallel narrative *Run Lola Run* evidences a relatively simple sequential narrative structure. Lola's boyfriend, Manni, is a minor criminal charged with delivering money to a criminal associate. He unfortunately leaves the bag containing the money on the subway twenty minutes before he meets with the associate. Manni calls Lola from a phone box asking her to raise the 100,000 Deutschmarks which he needs to pay off his associate or otherwise lose his life.

In the case of *Run Lola Run* story and form are integral – the story is the three different versions of Lola's run and the form is the three different kinetically driven stories. After the pivotal telephone conversation three versions of Lola's twenty minute run are repeated sequentially but unravel differently. Every version commences with the same opening sequence - however in the first version Lola dies, in the second Manni dies and in the third Lola meets with success. Time is mostly portrayed in chronological order except for the "random" events and characters that Lola encounters in each of the mini-narratives which are usually prefaced with the sub-title "and then". These act as a type of "aside" to prefigure a flash-forward to a series of events that happens in the lives of these random characters that will ultimately impact on Lola's life. These interludes bring up one of the main themes of the movie – "chance" (Matthews, 2007: 154). But it is also about the choices one may make based on the uncontrollable. Inevitably the exploration of the idea of chance and choice ultimately influence the form: in effect, if one were given another "chance" things might happen differently. The treatment of chance in *Run Lola Run* is enacted by the multi-form plot and as such produces a complexity of form

and structure. In effect the seemingly random nature of events and the extent to which chance and coincidence enact huge outcomes are reflected in the nature of the plots and their outcomes. Rather than a dramatic set-up which proceeds towards an inevitable end, there is a dramatic set-up which may have a number of endings. For example, in each repetition Lola always coincides with her father's work colleague as he leaves his driveway, she always reaches her father's workplace as he is talking to his lover, she always runs down the street as the ambulance is about to collide with a sheet of glass. However a small change to her timing has tremendous consequences in the plot. Twice Lola's encounter with her father's work colleague results in him having a crash so he misses his meeting with her father. In the incident where she doesn't collide with the work colleague and he doesn't crash, he meets with her father and this results in her father not being at work when she arrives. This chance event means she has to seek the money elsewhere. She inevitably does so by going to the casino and taking an even bigger chance to win the money needed.

Run Lola Run's narrative form therefore communicates the story as well as its themes. Lola is driven to run for her boyfriend's life. *Run Lola Run* is very much a film driven by an MTV aesthetic – a pulsing techno soundtrack with minimal dialogue creating a visceral kinetic energy. Throughout the film Lola runs in order to secure the money. The film includes animated sequences, black and white footage, stills and various regimes of speeding up and slowing down and instant replays. The entirety of the dynamic stylistic systems of cinematography, sound, music and editing of the film are embedded with and in turn form the bedrock of this urgent need or goal. For example, movement is a crucial element of *Run Lola Run*, and indeed the central image is that of Lola running with her red hair streaming behind her. Her run is as relentless as the editing which cuts and re-cuts on her as she runs. The beat of the music and the rhythm of the editing are equally as unremitting, driving her as the vital energy of the run is captured in the film. In the final analysis the stylistic elements of *Run Lola Run* are just as important in creating the audience's experience of the narrative as is the narrative structure and form. The form of *Run Lola Run* – how the story is communicated, not just the story or what happens - is an integral part of the story of *Run Lola Run*. In their contemporary application of Formalist

film theory David Bordwell and Kristin Thompson assert that all parts of a film function together to cue the audience to experience a film in a particular way. They conceive of film in two main areas, firstly, the narrative form which encompasses the traditional story elements of characters and events, and secondly, the plot and the elements involved in the narration of the story – the stylistic elements of cinematography, mise-en-scene, editing and sound (Film Art, 2001).

The non-linear narratives of films like *Memento* and *Pulp Fiction* are infinitely more complex than, for example, the narrative shells of computer games or indeed Heyward's new media narratives, *I am a Singer* and *Of Day, Of Night*, which rely more on the premises of the loss of memory and the deadline, than on a complex interweaving of plot lines. The cinematic complexity of narrative realized in the films *Amores Perros* and *Run Lola Run* with their Formalist concerns with the aesthetics of film and their Structuralist concerns with the complexity of interweaving narrative, are specific exemplars of the potential complexity and artistic treatment of narrative that are found in cinema and are yet to be found in new media narrative. In a linear form such as film, plot is not a random association of events, it results from a carefully structured approach to the unfolding of any given story. In films like *Run Lola Run*, the linking of segments of plot as the point of change from one scene to another, one event to another, or one time frame to another, involves the filmmaker in resolving a number of issues regarding narrative, drama, time, space and style.

In building an argument for complexity of narrative structure in the new media environment, there is much more at stake than a simple stringing together of incidents or stories in a linear or non-linear branching form. The question is, "How to go about creating and linking complex narrative structures in the myriad of ways enabled in the new media environment?" This leads to questions of: "At what point does one interact?" "What is the impetus to interact?" More importantly, "What implications does interaction have for the structure and form of the narrative as an art form?" These questions are yet to be fully addressed in new media research and practice. In the new media environment Mateas and Stern observe:

To date, a high agency interactive story has yet to be built. Existing game design and technology approaches, that focus on the feedback loop between player interaction and relatively simple numeric state, seem appropriate for modeling the player's effect on *story structure*, whose complex global constraints seem much richer than can be captured by a set of numeric counters or game pieces (Mateas and Stern, 2005a: 4). (Italics Mateas and Stern's own).

Researchers like Mateas and Stern acknowledge the centrality of narrative to the telling of stories in new media and the paucity of effective structure in new media storytelling. However it would seem that rather than starting with the story new media researchers are starting with the technology and adapting narrative to "fit". As Marie Laure Ryan states:

If we look at the history of narrative we can see it has survived the transition from orality to writing, from manuscript to print, from book to multimedia, and from the stage to moving pictures. Each of these technologies has liberated new narrative energies and exploited new possibilities... The survival of narrative does not depend on its ability to adapt itself to new media... Rather, it is the future of new media as a form of entertainment that depends on their ability to develop their own forms of narrativity (Ryan, 2004: 356).

Davenport also reaffirms the importance of using the structures and forms of storytelling. She asserts if new media narrative is to mature as an art form it will have to address:

The need to create a truly systematic approach to narration and story structure; the need to derive a flexible, universally applicable representational schema that describes the form, content, composition and subtext of media elements; and the need to establish conventions for interaction that are acceptable within the story framework (Davenport, 1997a: 3).

To discuss the "needs" that Davenport isolates and examine the form, structure and processes of narrative in cinematic new media storytelling, in the next part of this chapter, Part II, questions that relate to how theories of narrative and film may be applied to cinematic new media storytelling are addressed.

PART II: THEORIZING NARRATIVE FORM AND STRUCTURE

Introduction

How then, to address the treatment of narrative that has been liberated from a fixed model? How to introduce interactivity into this model? How to create the form and structure of a new media narrative that is more than a simplistic linear rendering of events or the creation of a virtual world? How to integrate the facets of drama and the stylistics of cinema – montage, mise-en-scene and cinematography into a new medium of delivery? In essence this is to ask: “How does one understand the creation of new media narrative as an art form?” As has been proposed, the answer lies in an understanding of the dramatic and cinematic nature of narrative – what one can do with narrative - rather than focussing on what the technological tools can do. As Davenport contends:

Cultural and technological innovations have resulted in new forms and uses of media. Unfortunately, the very tools that liberated computational expression in the 1990s have now become a limiting factor.... There is no concern for the higher-level conceptual play, for browsing through different metadata representations and alternative sequencings, for creating conceptual structures, or for providing the user with subtle or surprising story juxtapositions (Davenport et al., 2004: 162)

3.14 The Art of Film Form – *Poetika Kino* (Poetics of Cinema)

The Russian Formalists considered the question of how to theorise cinema as its art and technology developed in their *Poetika Kino (Poetics of Cinema)*(1927) which represented “the first concerted, and at least relatively coherent, attempt to suggest the specific defining characteristics of film as an art form” (Taylor, 1982: I). Whereas Aristotle’s *Poetics* focused on analysing and categorising the key elements of the poetic form of dramatic tragedy, the Russian Formalists’ *Poetika Kino* (1927), edited by Boris Eichenbaum, focused on analysing and categorising the key elements of cinema.

Poetika Kino (1927) presents a “poetics” of cinema that is a collection of albeit integrated, but disparate essays by key Formalist film theorists. Translations of the original Russian *Poetika Kino* did not reach the English-speaking world until the 1950s

and 1960s and are still not readily available (Lemon and Reis, 1965: ix; Eagle, 1981: x). Those essays referenced in this thesis are the first complete translations made available to the English reader and for the most part are collected in Eagle's (1981) *Russian Formalist Film Theory*. The essays of *Poetika Kino* (1927) include Eichenbaum's "Problems of Cine-Stylistics"; Tynjanov's "The Fundamentals of Cinema" (which dealt with the semiotic nature of cinema and film syntagmatics); Kazansky's "The Nature of Cinema", (which dealt with cinema as an art form in relation to other arts); Piotrovsky's "Towards a Theory of Film Genres"; Shklovsky's "Poetry and Prose in the Cinema" and Mikhailov and Moskvina's "The Cameraman's Part in Making a Film" (which dealt with the stylistic significance of cinematography). Shklovsky's (c1920) "Art as Technique" and Eichenbaum's "The Theory of the Formal Method" (1927) are also key treatises of import to Formalist poetics. It should also be noted that the concepts advanced in *Poetika Kino* influenced Russians, Lev Kuleshov and Sergei Eisenstein's formulation of ideas on montage published two years later (Eagle, 1981: ix).

In the poetic tradition both Aristotle and the Russian Formalists were scientifically rigorous in their approach - they carefully analysed, categorised and gave exemplars to validate their treatises on poetic form. Whereas Aristotle listed the six key elements of dramatic tragedy in terms of the medium, mode and manner of imitation as being "Plot, Character, Diction, Thought, Spectacle, Song" (*Poetics*, Section 1: Part VI: 5); the Russian Formalists considered the key elements of cinema to be style, plot, genre and language as exemplified in montage, cinematography and mise-en-scene. (As *Poetika Kino* was published in 1927 prior to the coming of sound in film, the Formalists did not consider sound and music as elements of cinema at this stage of cinematic history. However in the essay, "Is the Cinema in Decline?" which was published in 1933, the Prague Structuralist, Roman Jakobson, in his re-assertion of the importance of Formalist principles in the discussion of cinema as an aesthetic language, discusses sound in terms of the re-creation of reality rather than as a cinematic device).

Whilst Aristotle's focus was more on the narratological aspects of dramatic poetry in terms of its structural and formal nature, the Russian Formalists' focus was more on the

stylistics of cinema in its artistic and formal nature - for the most part enabled by montage. Aristotle focused on the poetic nature of “plot-structure” and its ability to draw forth certain emotions in the audience as the most significant of the six key elements of drama. The Russian Formalists focused on the poetic nature of the elements of cinema – the structuring of the visual aspects and means of organization whether it be in narrative, stylistic or thematic terms - as a means of promoting and heightening audience engagement in the cinematic object.

Aristotle’s systematic analysis of the forms, features and functioning of the literary form of dramatic poetry are the hallmarks of both Formalist and Neo-Formalist enquiry into artistic form and serves to align his approach with that of the other key theorists considered in this thesis - the Russian Formalists and the contemporary Neo-Formalist, David Bordwell. In the *Poetics* Aristotle set out to categorically disprove the critique of poetry as an art form. Scholars postulate that the *Poetics* is to some extent Aristotle's response to Plato – his teacher’s - critique of poetry in *The Republic* as being merely representational of appearances and thus misleading and morally questionable (Halliwell, 1986: 1-3; Appendix 2: 331- 336. Here Halliwell considers at length the converging and diverging views of Aristotle and Plato’s thinking on poetry as an art form). In the context of the artistic and technological parameters shaping new media narrative considered in this thesis, it is noted that critique as impetus for the elaboration of the specific features of an art form serves to align Aristotle’s approach in writing the *Poetics* with the Russian Formalists’ approach in writing *Poetika Kino* (1927). In reply to Plato’s comments (Halliwell, 1986: 1-3), Aristotle was motivated by the challenge of critique (*Poetics*, Section 3, XXVI: 24) and validated poetry as an art form by analysing and creating categories of poetry and organizing them into coherent systems. The Russian Formalists also published *Poetika Kino* in the face of criticism. In this case it was in response to the critique of Trotsky and other Marxist detractors who saw the Formalist’s approach to art as being too technical on one hand and too aesthetic on the other (Lemon & Reis, 1965: 99-101). In particular the leading Formalist critic, Boris Eichenbaum, validated the methodology of Formalism in “The Theory of the Formal Method” (Eichenbaum, 1926, 1927) as a direct response to 1924 Marxist critique on the aesthetic rather than social nature of art in “The Press and the Revolution” (Eichenbaum, 1926: 103). Therefore like

the Russian Formalists in validation of cinema as an art form in the face of criticism, Aristotle considered literary texts scientifically by carefully elaborating the features of each type of text and attempting to account for how each functioned as art. It is also observed that in pursuing such an approach Aristotle did not classify the *Poetics* as purely aesthetic – “a declaration of the complete autonomy of poetic standards and principles” - (Halliwell, 1986: 3) or a treatise on the pursuit of the pleasure of “art for art’s sake”. Rather Aristotle’s stance was to show that the creation of “good” art adhered to certain intrinsic principles (*Poetics*, Section 3: Part XXVI: 24) and an understanding of the activity for which it was designed. For Aristotle art could not therefore be judged in terms of the didactic, ethical and political philosophy that Plato espoused to assess and evaluate art (Halliwell, 1986: 4) but rather on its merits as an artistic object.

The Russian Formalists also focused on the aesthetic nature of literature and cinema, but this is not to say that the Formalists were solely concerned with the aesthetics of cinema. Like Aristotle (*Poetics*, Section 3: Part XXVI: 24), the Formalists believed that the development of the intrinsic features of the cinematic art form were an imperative. However the Russian Formalists extend Aristotle’s brief concern with the aesthetic principles of artistic practice to a consideration of the means by which an artist could create objects that engender and intensify the experience of art.

The Russian Formalists were the first theorists to consolidate an overall poetics of cinema (Stam, 2000: 49). Of relevance to this thesis is the relatively unexplored nature of the original Russian Formalist poetics of cinema, due to its unavailability in the West. Although the filmmakers Eisenstein, Pudovkin and Dziga Vertov were making their films and presenting their ideas about the nature of cinema in *Strike* (1924), *Battleship Potemkin* (1925), *Mother* (1926), *October* (1928), *Ivan the Terrible* (1944-1946), *Storm Over Asia* (1928) and *Man with a Movie Camera* (1928) in the same period, they did not set out to formally compose a poetics of cinema as did the Formalists. The montage theories of Kuleshov, Pudovkin and Eisenstein later extended and commented upon the Formalists’ original theory (Eagle, 1981: x).

Research for this thesis has found that except for Eagle's preface to the English translation of *Poetika Kino* in 1981, Bordwell's referencing of the Russian Formalists in his *Narration and the Fiction Film* (1986), Stam's (1992) brief overview of Formalist Film theory in *New Vocabularies in Film Semiotics Structuralism, Post Structuralism and Beyond*, and Jameson's one sided discussion of Structuralism as opposed to Formalism in *The Prison-House of Language* (1974), scant substantive reference to Russian Formalist film theory is made in academic film theory and no detailed reference to Russian Formalist film theory has been located in new media theory. Although Manovich as has been seen is enamoured of the work his historical compatriot and the Russian Formalists' contemporary, Dziga Vertov, he only briefly refers to Eisenstein's montage theory. In this case he merely discusses it as a means of exploring thought control (Manovich, 2001: 14), as a means of correlating different senses (Manovich, 2001: 143) and his montage theory in terms of its temporal, rhythmic and graphical dimensions (Manovich, 2001: 156-157). Additionally Manovich completely ignores the crucial existence of the Russian Formalists and their vital contribution to cinematic theory in *The Language of New Media* although he does refer to them in his rejection of the notion of a poetics (Manovich, 2001: 12) and to the Russian Constructivists and Productivists of the 1920s and their use of the word "object" to refer to their creations (Manovich, 2001: 14). This thesis for the first time represents a further extension of the original Russian Formalist poetics of cinema as presented in *Poetika Kino* to a poetics of new media cinematic narrative.

3.15 Russian Formalism and "the Stoniness of the Stone"

What makes Formalist film theory so important to cinematic theory and new media theory is the Formalists' focus on what may be considered the aesthetics of film. This focus can be understood as a result of the Formalists' central philosophy of artistic practice derived from the basic philosophies of the Formalist methodology advocated in Victor Shklovsky's "Art as Technique" (1917) and Boris Eichenbaum's "The Theory of the Formal Method" (1926) published prior to *Poetika Kino* (1927) (Lemon and Reis, 1965: 3). The poetic nature of literature and then cinema was for the Formalists a way of

experiencing what Shklovsky in 1919 in “Art as Device”, first called the “artfulness of the object” for experiencing “the stoniness of the stone” (Shklovsky in Stam, 1992: 11. No English translation available). The Formalists’ concentration on the stylistic techniques of cinema – montage, cinematography and mise-en-scene - as an important part of the film process, was a result of their adoption of Shklovsky’s view that the aesthetic function of the elements of an artwork is dominant in art (Eagle, 1981: 4). For Shklovsky the essence of art lay in renewing perceptions of reality which everyday life tended to make mechanical and thus imperceptible. In defining the paradigms of the art of literature, Shklovsky contended: “Habitualization devours works, clothes, furniture, one’s wife, and one’s fear of war. If the whole complex lives of many people go on unconsciously, then such lives are as if they had never been” (Shklovsky, 1917: 11- 12). For Shklovsky the purpose of art in countering this “habitualization” was enabled by the process of what he termed “ostraneniye” (which literally means making strange or “defamiliarization”) which reawakens the perceptions:

Art exists that one may recover the sensation of life; it exists to make one feel things, to make the stone, *stony*. The purpose of art is to impart the sensation of things as they are perceived and not as they are known. The technique of art is to make objects “unfamiliar”, to make forms difficult, to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged. Art is a way of experiencing the artfulness of an object, the object is not important (Shklovsky, 1917: 12). (Emphasis Shklovsky’s own).

With this focus on “artfulness of the object” the Formalists were therefore “aestheticist” in their conception of the creation of art and representation of reality – their understanding of art was as a schemata of elements and conventions of function rather than a registration of reality (Lemon & Reis 1965; Eagle, 1981; Bordwell, 1985). Shklovsky for example dismissed the pursuit of realistic representation as the purpose of art: “An image is not a permanent referent for those mutable complexities of life which are revealed through it; its purpose is not to make us perceive meaning, but to create a special perception of the object – *it creates a vision of the object instead of serving as a means of knowing it*” (Shklovsky, 1917: 18) (Italics Shklovsky’s own). Shklovsky enumerates a number of ways that an artist may leave his “artistic trademark” and hence

achieve the process of defamiliarization “to create the vision which results from deautomatized perception” (Shklovsky, 1917: 22). These techniques include, as Shklovsky notes, the employment of “poetic language” as first suggested by Aristotle in the *Poetics* for whom “poetic language must appear strange and wonderful” (Aristotle in Shklovsky, 1917: 22). For Shklovsky these elements also include plot construction which in its defamiliarized mode becomes “psychological parallelism”, the purpose of which “like the general purpose of imagery, is to transfer the usual perception of an object into the sphere of new perception – that is to make a unique semantic modification” (Shklovsky, 1917: 21) – in other words the use of plot as an aesthetic tool and element of an artwork.

3.16 Plot Design as an Artistic Device

The crucial significance of the Formalist approach to narrative in terms of the aesthetics of plot structure is the distinction that the Formalists make between *fabula* and *syuzhet*, which, as noted in Chapter 2, can be translated as the imaginary construct of story, the *fabula*, as rendered by the actual narrative and stylistic patterning of the plot, the *syuzhet*. Thus it can be seen that the Formalists drew the distinction between the idea of plot as structure and the idea of the story as material. According to Eichenbaum in “The Theory of the Formal Method”, the first of Shklovsky’s works on plot, “The Relation of Devices of Plot Construction to General Devices of Style” (*Poetika*, 1919) (No English translation available), raised a number of ideas about plot construction as a device.

In the first place, the proof that special devices of plot arrangement exist, a proof supported by the citation of a great number of devices, changed the traditional notion of plot as a combination of a group of motifs and make plot a compositional rather than a thematic concept. Thus the very concept of plot was changed; *plot* was no longer synonymous with *story*. Plot construction became the natural subject of Formalist study, since plot constitutes the specific peculiarity of narrative *art*. (Eichenbaum, 1926: 116). (Emphasis Eichenbaum’s own).

It is this distinction between plot as a structural method of joining one segment of plot to the text in a temporal sequence and plot as a stylistic device that is of significant interest in this thesis. For example in the essay, “Poetry and Prose in the Cinema” (1927),

Shklovsky uses the terms “fabula” and “syuzhet” to present this distinction via for example the transposition of the plot’s constituent parts “by putting the ending at the beginning or by a more complex rearrangement of parts” (Shklovsky, 1927: 87). The distinction that Shklovsky makes between fabula and syuzhet is later further developed by Tomashevsky in “Thematics” (1925) in terms of the division he also makes between story and plot and his emphasis on the artistry involved in presenting the plot.

Tomashevsky also distinguished between different “motifs” and the logical, causal motivations that progress the plot (Tomashevsky 1925: 67). A motif is what Tomashevsky considered to be the irreducible thematic element of a story, for example, “evening comes”, “the hero dies”, “and the letter is received” (Tomashevsky 1925: 67). (These are similar to Propp’s functions derived from his study of the wondertale discussed below):

Mutually related motifs form the thematic bonds of the work. From this point of view, the story is the aggregate of motifs in their logical, causal-chronological order; the plot is the aggregate of those same motifs but having the relevance and the order which they had in the original work. The place in the work in which the reader learns of an event, whether the information is given by the author, or by a character, or by a series of indirect hints – all this is irrelevant to the story. But the aesthetic function of the plot is precisely this bringing of an arrangement of motifs to the attention of the reader. Real incidents, not fictionalised by the author may make a story. A plot is a wholly artistic creation (Tomashevsky 1925: 68).

The arrangement of the events in a narrative can be understood in terms of the “artistic” organization of these events (which can be seen as being in keeping with Shklovsky’s concept of “defamiliarization”) via the syuzhet in its re-arrangement or deformation of the logical causal-chronological succession of events - the artistic organization of the story into plot.

Although Shklovsky’s contribution to *Poetika Kino* (1927) was minimal in terms of the Formalists’ methodology (“Poetry and Prose in Cinema” is a minor essay on the allusion to narrative cinema as prose and what today would be termed avant-garde cinema as poetry) his contention that the aesthetic function of a cinematic device as outlined in “Art as Technique” (1917) was not. Throughout the 1920s the Formalists were influenced

heavily by his focus on the aesthetic role of the “device” and its role in defamiliarization as part of artistic creation and perception (Eagle, 1981, 4).

Eagle observes that Shklovsky’s “Art as Technique” (1917) is an important statement of early Formalist methodology (Eagle, 1981: 4). In this thesis it offers a theory of the purpose of art in terms of heightening audience perception via the use of the stylistic elements of poetic language. Although today Shklovsky could be criticized for his lack of concern for meaning and interpretation in art, it should be remembered that like Aristotle and the Russian Formalists, he was writing in defence of literature and cinema as literary objects in the face of criticism that the purpose of art should be for purely philosophical or moralistic reasons (Eagle, 1981: 2). Moreover Shklovsky’s observation that the structuring of plot or its “unique semantic modification” (Shklovsky, 1917: 21) can be regarded as a stylistic device is an important foundation of this thesis. The use of complex plot structures as a device of style as considered in this thesis has not been developed by contemporary Neo-Formalists, including David Bordwell. Moreover a method or taxonomy that would be useful for the description of the elements of plot structure is not to be found in Formalist film theory, for this reason Structuralist theories of narrative are examined below.

3.17 Narratology and the Principles of Narrative - Structuralist Theories of Plot

The notion of narrative information as being segmentable and as being articulated as a language, suggested by the Russian Formalists and Tomashevsky in particular has been variously addressed in literary (Propp, 1968; Barthes, 1977), cinematic (Metz, 1977; Porter et al., 2002) and new media theory (Manovich, 2001). Aristotle refers to the language of tragedy, Manovich to the language of new media. The Russian Formalist, Eichenbaum, asserted that:

Any art whose perception proceeds through time must have some kind of articulation, since it is, to a greater or lesser extent, a ‘language’. Beginning with the smallest components constituting the nature of the material itself, one can go further and arrive at a segmentation into defined structural parts which are actually perceptible (Eichenbaum, 1927: 71).

Eichenbaum did not attempt a typology of the segments and structures of narrative cinema (Eichenbaum, 1927: 73) but he did identify a number of principles of syntagmatic construction – comparison, contrast, coincidence (Eichenbaum, 1927: 76) – which underlie the *Grande Syntagmatique*, the French Structuralist Christian Metz’s typology of montage developed more than forty years later (Stam, 2000: 11).

Structuralism can be regarded as relevant to the study of a computer generated art form like new media narrative as it presents an abstract, conceptual or mathematical approach to literary analysis by describing it in terms of structures and models. (While it is not the work of this thesis to trace the long history of the development of Structuralism, it is pertinent to note the varying influences that have been exerted on Structuralism - namely the structural linguistics of Ferdinand de Saussure and the structural anthropology of Claude Levi-Strauss [Harland, 1997: 219]). Of particular interest to this thesis is the work of the important French Structuralist theorists, Roland Barthes and Christian Metz, who are both referenced by Manovich in validation of his treatise in *The Language of New Media* (Manovich, 2001: 28-29, 125; 294, 310). Historically the principles of both Structuralism and Formalism have been applied to cinema in its emergence as an art form although both these disciplines originated in the study of literature and language. In this thesis the Structuralist principles of narrative that will be used to inform the development of a poetics of new media narrative are derived from what has become known as the discipline of “Narratology”. Although initially considered a sub-field of 1960s French Structuralist literary theory, “Narratology (a term that is interchangeable with narrative studies) can now be used to refer to any principled approach to the study of narratively organized discourse, literary, historiographical, conversational, filmic, or other” (Herman, 1999: 27).

The Structuralist assertion that the most important linguistic analogy is the analogy between the structure of a narrative and the syntax of a sentence is particularly pertinent to the discussion of the “language” of new media narrative. For example Barthes’ contention that “a narrative is a long sentence... just as every constative sentence is in a way the rough outline of a short narrative” (Barthes, 1977: 84) is of significant interest in

discussions of the conception of narrative as a language. It is Barthes' analogy that provides the base concept that the overall articulation of a narrative adheres to certain conventional rules in the same way that the articulation of a sentence obeys the rules of syntax and grammar. Barthes' definition of language is therefore particularly useful as a starting point for the discussion of new media narrative as a system that follows rules similar to those of a language. In his long essay "The Structural Analysis of Narrative" (1977), Barthes clearly differentiates between the form and functioning of narrative and explains in some detail its segmental structure:

Language (*langue*) proper can be defined by the concurrence of two fundamental processes: articulation and segmentation, which produces units ... and integration, which gathers these units into units of higher rank (this being *meaning*). This dual process can be found in the language of narrative (*la langue du recit*) which also has an articulation and integration, a form and a meaning... (Barthes, 1977: 117). (Italics Barthes' own).

It is Barthes' assertion that segments of language produce basic units that once combined into a form, thus produce meaning during the process of articulation, that enables the understanding of the theoretical factors that are inherent in the delivery of narrative form both via and as language. Narrative form can therefore be seen to have a dual nature – on the one hand in Formalist terms it exists as a complete formal entity but on the other hand in Structuralist terms it can be analysed in terms of the various expansions and combinations of the elements or segments that contribute to this overall form.

It is the Structuralist consideration of the processes of language as delineated here by Barthes - "articulation and segmentation" and "integration" - that is addressed in the scientific approach to new media narrative engendered in the concept of a poetics in this thesis. By considering how the discrete elements of plot may be segmented, selected and ordered one may draw conclusions about the shaping and unfolding of interactive narrative in new media. These include a consideration of the ordering of narrative in terms of syntagm and paradigm considered in the next section. As noted in the previous section, by considering the precepts of Formalism one is able to reach conclusions about how form and style shape the articulation or unfolding of narrative. At this stage it must also be noted that in this thesis the actual meaning of a text – the semantics ("which

deals with the relation of the signs and messages produced by narrative to the larger cultural system that gives it its meaning” [Stam, 1992: 76]) is not being considered but rather a Structuralist consideration of the syntactics (“the study of the syntagmatic ordering of plot events as a kind of armature of narrative progress and development” [Stam, 1992: 76]) as it contributes to narrative form. Overall therefore rather than decoding the formal and structural principles as they are used to create meaning, the concern is with how the articulation and segmentation of narrative is integrated into a formal whole or new media object to create a story.

3.18 The Ordering of Narrative – Syntagm and Paradigm

Structuralist theory is also of relevance as it provides a way of thinking about how segments of narrative may be ordered in syntagmatic terms - both in terms of narrative function and in terms of time and space. The Russian Formalist Jakobson, who later became a Prague Structuralist (Lemon and Reis, xv) claimed, following de Saussure, that a linguistic unit must be defined not in itself, but by its structural relations with other units - in de Saussurean terms, “syntagmatic”. Jakobson emphasized the artistic as well as syntagmatic properties of relations between the elements of a language. In the essay, “Is the Cinema in Decline?” (1933) Jakobson argued:

Film works with manifold fragments of objects which differ in magnitude, and also with fragments of time and space likewise varied. It changes their proportions and juxtaposes them in terms of contiguity, or similarity and contrast (Jakobson, 1933: 162).

Here Jakobson presents the Structuralist concern with the contiguous or syntagmatic relationships between the discrete elements of a film. He also draws attention to the fact that each of these elements has a temporal and spatial dimension as well that impacts on the way these elements function in the film. However in “Is the Cinema in Decline?” Jakobson merely telescoped his concerns with cinema as an art form, and like other Russian Formalists and Prague Structuralists of the 1930s, he did not develop a model that is useful for the analysis of narrative structure and function.

The work of the French Structuralists of the 1960s and 1970s in their attempt to be more specific in their analogies between the elements of story and the syntactic rules of grammar provides the tools for analysing the narrative function of the language segment. The French Structuralists endeavoured to develop a grammar of narrative due to the influence of the Russian, Vladimir Propp's then dominant theory of narrative based on thirty-one constant elements or "functions" of the Russian "wondertale" (Stam, 1992, 19). To appreciate the significance of Structuralist narratology in developing a framework for the writing and potential digital re-configurations of interactive narrative, it is useful to re-visit the origins of Structuralist narratology as influenced by Propp. Whilst the Russian Formalists were the first to discuss narrative structure in film in the late 1920s, it wasn't till the 1970s that the work of Propp as presented in *Morphology of the Folktale* (first published in 1928 but only translated into English in 1968), was influential in the analysis of plot structure in syntagmatic terms – the ordering of plot as a chain of events (Stam, 1992: 76). Stam notes that Propp was a tangential member of the Russian Formalist school (Stam, 1992: 79). Propp's focus on the functional aspects of the elements of Russian folktales certainly reflects the Formalists' concern with form and function.

Propp's structuralist analysis of narrative function is worthy of detailed analysis for two main reasons. Firstly it provides the acknowledged foundations of Structuralist narrative analysis and secondly it addresses (although in a literary form) the idea of the motif that as noted in the previous section was alluded to by Tomashevsky (Tomashevsky 1925: 67 - 68). Propp analysed the recurring motifs and functions that could be abstracted from his research into the Russian "wondertale". For Propp, such functions "serve as stable, constant elements in a tale, independent of how and by whom they are fulfilled" (Propp, 1968: 21). In all, Propp reduced the significant functions or segments of action (similar to the sequence of film language) to thirty-one types (Tabled at Appendix A) and individual characters to seven fundamental roles which he called "dramatis personae". Propp asserted that out of these thirty-one functions and seven dramatis personae one would be able to reconstruct all the stories of his sample of one hundred Russian fairy tales. What is of key significance to the study of new media narrative is Propp's concern

with the temporal and causal unfolding of narrative. Propp's method and concern with causality may be illustrated briefly by quoting his overview of a typical tale:

Morphologically, a tale may be termed any development proceeding from villainy (a) or a lack of (A), through intermediary functions to marriage (W*), or to other functions employed as a denouement. Terminal functions are at times a reward (F), a gain or in general the liquidation of misfortune (K), an escape from pursuit (Rs) (Propp, 1968: 92).

In essence every story has a hero. Usually the hero is confronted by an act or situation or villain that upsets the hero's world and this leads the hero on a quest which involves events such as those listed by Propp in his table of functions – struggles with the villain, pursuit, falsehoods and finally a climax which entails either transfiguration, exposure of the false hero and in the Russian wondertale or the Hollywood “happy ever after ending” - a wedding or ascension to the throne in a literal or metaphorical sense. Propp's analysis can still be validated in current scriptwriting theory particularly for example in the work of Christopher Vogler (c1998) and his focus on the hero's journey as exemplified in mainstream Hollywood cinema such as Indiana Jones' journey in *Raiders of the Lost Ark* (1981).

At this juncture it must be noted that there are more contemporary models of narrative function available to analyse narrative structure and function. For example Seymour Chatman identifies the segments of narrative function in *Story and Discourse: Narrative Structure in Fiction and Film* (1978) in terms of the essential causal “kernels” and less essential expository “satellites” of a narrative. However his model is limiting and non-specific. Porter et al. (2002) build on Chatman's model in their development of the *Scene Function Model* in their research into the classification of the functioning of television scenes. They attempt to elaborate on and provide a functional explanation of Chatman's kernels and satellites by developing a schema of six kernel scenes and twelve satellite scenes. Kernel scenes for example include the narrative functions of “disturbance, obstacle, complication, confrontation, crisis and resolution” (Porter et al., 2002: 26). These functions reflect of course the basic components of the Aristotelian dramatic plot also acknowledged by the dramatic theorists Laos Egri (1946) and Sam Smiley (1971)

and the screenwriting theorists Linda Seger (1994), Robert McKee (1998) and Linda Aronson (2000a). Porter et al. list the functions of the twelve satellite scenes as being: “exposition, dramatic question, introduction of new character, action, plan revealed, relationship affirmation, clarification, conflict continues, relief, theme, foreshadowing and ambiance” (Porter et al., 2002: 27). Referring to the detailed descriptors of Porter et al.’s *Scene Function Model* (See Appendix: B) it is obvious that the element of “relief” which “provides a release for the audience, a diversion from the preceding story” for example is not an essential element of narrative development whereas the kernel scene “obstacle” which “introduces an opposing force” to the hero is. While models such as Porter et al.’s *Scene Function Model* are useful in helping us understand how segments of narrative material may be classified for the purposes of this thesis it is not within the scope of this study to develop a comprehensive model detailing the definitive aspects of narrative function when for example at this stage Propp’s model of narrative is concise, genre specific and sufficient for the purpose of this investigation. Although he is regarded as a Structuralist, it is Propp’s focus on the temporal sequence of narrative as it unfolds that is of importance when considering the delivery of narrative material as it is applicable to a medium in which a narrative is experienced in a linear sequence. This is particularly the case in what is regarded as a new media narrative form – non-linear narrative and its tampering with the rendering of narrative in chronological time. A basic knowledge of Propp’s functions is important to an understanding of the narrative functions imbedded in the sequences and syntagmas of narrative enunciation as ultimately the computer database must be coded with narrative events which unfold in a specified order. On the other hand the specification of this order is another matter for consideration.

3.19 Ordering Time and Space– Metz and the *Grande Syntagmatique*

Propp’s table of functions referred only to the literary folktale – a purely oral medium and not the visual medium of film. For the new media cinematic narrative theorist, the French

Structuralist Christian Metz's *Grand Syntagmatique* (See Appendix C) presents a theory of how film constitutes itself as a narrative discourse in time and space is of significance to an analysis of the ordering of narrative in a digital environment. This is because the treatment of time and space are the key parameters of what is regarded as a new media phenomena - interactivity - the potential to chronologically re-order segments of narrative or spatially interact with narrative. Of particular importance to the consideration of a poetics of narrative in new media is the fact that the *Grande Syntagmatique* addressed a question that is paramount to any discussion of the potential to create and deploy combinations of narrative syntagmas in a narrative environment: "What are the diverse possibilities of temporal and spatial articulation in the fiction film?" (Stam, 1992: 48). In the taxonomic categories presented in the *Grande Syntagmatique* Metz attempted to answer this question by categorising all the film syntagms used in classic narrative cinema. Of additional significance to the study of new media narrative in this thesis is the fact that in *Film Language* (1974), Metz considers cinema as a language, as does the Russian Formalist, Eichenbaum, the French Structuralist, Barthes and the new media theorist, Manovich.

Metz approached the study of cinema as language but he saw it as being totally different from verbal language because cinema operates as a visual language (Metz, 1974: 44). In *Film Language* (1974) Metz suggests cinema can "be considered as a language, to the extent that it orders signifying elements within ordered arrangements different from those of spoken idioms – and to the extent that these elements are not traced on the perceptual configurations of reality itself" (Metz, 1974: 105). Additionally Metz notes the narrative power of cinema in the essay, "The Cinema: Language or Language System" (1974). Here Metz specifically states: "The cinema is a language... It is not because the cinema is language that it can tell such fine stories, but rather it has become language that it has told such fine stories" (Metz, 1974: 47).

Metz's Structuralist *Grande Syntagmatique* and its determination of how images link in a pattern to form an overall narrative functioning of a filmic text is of key significance to a poetics of new media narrative for the following reasons. Firstly it endeavours to

classify segments of cinematic narrative according to their temporal or spatial function – descriptive, illustrative or narrative - and their place in an overall narrative. Secondly it deals with the important narrative parameters of space and time and offers a typology of how they affect the ordering of segments through editing in a narrative film. Thirdly it is still currently without peer in its analysis and classification of the spatio-temporal aspects of cinema. “The *Grande Syntagmatique*, whatever its flaws, still offers the most precise model to date for dealing with the specific image-ordering procedures of a narrative film” (Stam, 1992: 48). Metz’s articulation of narrative cinema as a language that observes logical patterns of development presented in terms of the paradigms of time and space, in the *Grande Syntagmatique* in a useful approach to the study of the narrative and descriptive functioning of narrative elements. It is particularly useful in a consideration of image based or cinematic narrative in new media that addresses the diverse ways of ordering images in their spatial and temporal articulation in the fiction film. The syntagmatic types are useful in describing or defining the spatio-temporal parameters or stylistic options of particular films. For example, if one were to simplify Metz’s categories for application to new media narrative, according to Monaco, it could be distilled into the following key indicators of the treatment of the narrative syntagma - as being autonomous, chronological, descriptive, linear, continuous, organized or not (Monaco, 1981: 189).

While the *Grande Syntagmatique* is an admirable model of how narrative may be ordered in space and time, one of the inherent weaknesses of Metz's syntagmatic model is that due to its Structuralist nature, there is no methodology for analysing concepts of montage in terms of dramatic structure or montage stylistics. (The issue of stylistic linkage and coherence is addressed in this thesis by Formalist film theory in Chapters 4 and 5). The Formalists, rather than insisting on trying to enumerate all possible syntagms in a film, attempted to identify the principles of the formation of units of cinematic phrases in the cinema. In establishing the functions of devices in the cinema and accepting their mutability as dependent on their function in various objects, the Formalists posited a framework for both the creation and consumption of cinematic objects. But as already stated, because new media objects are dependent on code for

their function and the code informs the type of function the element of the cinematic text must perform in its constitution as part of a whole, it is necessary to give a discrete unit of digital narrative information a narrative denomination. This is where Structuralist descriptors like Metz's *Grande Syntagmatique* are useful in the formulation of new media objects. But in the final analysis while the Structuralists addressed the taxonomy of narrative functions and considered the arrangement of plot as a narrative device, their focus was not on the artistic arrangement of plot and definitely not on the stylistic arrangement of plot.

3.20 The Formalists and the Aesthetics of Film Style -Plot as a Formal Structure

The Russian Formalists' distinction between story and plot in terms of style is addressed by Tynjanov in his discussion of the foundations of cinema. Tynjanov (1927) states that "two approaches were advocated by Victor Shklovsky, the creator of the new theory of plot: (1) plot as development and (2) the relationship between devices of plot construction and style..."(Tynjanov, 1927: 95). However as Tynjanov also notes the Russian Formalists did not develop their ideas about plot as a stylistic device: "The relationship between plot and styles, and their role in film genres, demands extensive study. I have limited myself here to formulating the questions" (Tynjanov, 1927: 100). Tynjanov's questions relate to rhythm, camera angle and lighting and how they reflect the "poetic" nature of cinema but most focus on how these elements progress plot in terms of montage (Tynjanov, 1927: 94-100).

The Russian Formalist Kazansky's definition of film style - "The style of an art form might be roughly defined as the system or method of utilizing the artistic, technical, and structural means belonging to the given art" - is clear and concise (Kazansky, 1927: 127). Moreover Kazansky's deliberations regarding narrative, montage and style afford a precise definition of the essential interrelationship and complementary functioning of all these artistic, technical and structural elements:

The style of a film is created only in the succession of shots, in the construction of a linked series of representations on the screen in a definite conceptual sequence, constituting as a group a single unit of the

plot. In other words, the stylistics of film is created through *montage* (Kazansky, 1927: 127). (Emphasis Kazansky's own).

In films where style is foregrounded as perhaps the most important element of the film, the montage of shots in terms of both film style and plot does play a substantial role in structuring the film. Zhang Yimou's *Raise the Red Lantern* (1991) is a case in point. It is a metaphorical story revealing the entrapment and gradual demise into madness that is the fate of Songlian (Gong Lee), the fourth wife of a wealthy Chinese man. *Raise the Red Lantern's* drama is stylistically and dramatically unveiled through the use of cinematography and the limited location of the master's house which is used to convey the entrapment of the concubine in a patriarchal society. In a highly regulated environment it is also a grand metaphor conveying the entrapment of women in general in Chinese society.

Historically the Formalist ideas about the stylistic use of plot lay dormant for over fifty years until taken up in part by Bordwell in his Neo-Formalist application of the original Russian Formalists' observations about cinema as an art form. Stam notes, "Despite its suggestiveness, the position staked out by Tynjanov was largely ignored in film studies until David Bordwell took up its central premises and developed them at length in *Narration in the Fiction Film*" (Stam, 1992: 73). In *Narration in the Fiction Film* (1985) and later in the eight editions of *Film Art*, Bordwell builds a compelling and intricately detailed theory of the stylistic systems and functioning of mise-en-scene, cinematography, montage and sound as the audience "searches for the story". While it is not within the scope of this thesis to retrace Bordwell's theory it is noted he firmly establishes the theoretical and practical functioning of the elements of mise-en-scene, cinematography and editing by citing numerous examples from a century of cinema. Bordwell's concept of plot progression as motivated by style - the way in which the syuzhet relates to the fabula - aligns with Tynjanov's idea that in certain works "style, the stylistic relationships between the pieces that are linked together, comes forward as the principal mover of plot" (Tynjanov, 1927: 97). Of particular note is the fact that research for this thesis reveals that this concept of systems of style as motivators of plot as yet, has not been extended to the investigation of new media narrative.

3.21 Contemporary Models of Form: Bordwell and Neo-Formalism

For Bordwell Neo-Formalist poetics is not a methodology but “an angle of heuristic approach, a way of asking questions” (Bordwell, 1989b: 379). The Neo-Formalist asks: “How are particular films put together? Call this the problem of film’s composition. Second what effects and functions do particular films have?” (Bordwell, 1989a: 263). Bordwell, like the Formalists in defence of their methodology (Eichenbaum, 1926: 102-103), notes that the practice of film theory that has led to interpretative analysis, the work of the “explicatory critic” has sidelined both this methodology and the filmmaker’s role in the construction of the film, whereas according to Bordwell, the Neo-Formalist

as a historian of forms, genres, and styles, ... starts from the concrete assumptions embedded in the filmmaker’s craft...the poetician aims to analyse the conceptual and empirical factors – norms, traditions, habits – that govern a practice and its products (Bordwell, 1989a: 268-269).

Bordwell concludes that Neo-Formalist poetics has established several key analytical concepts: “the usefulness of distinguishing between stylistic or narrative devices (eg the cut or the motif) and systems (eg spatial continuity or narrative causality) within which they achieve various functions”(Bordwell, 1989b: 9). Although Bordwell classifies himself as a Neo-Formalist, the definitions that he gives of Formalism are somewhat illusory or ephemeral. By contrast the original Formalist methodology as consolidated by Eichenbaum is much more specific and helpful to the purpose of developing a poetics of new media in both narrative and stylistic terms.

Hence both schools of Formalist theory – the “Formalism” of the Russian Formalists and the “Neo-Formalism” of Bordwell - are referenced in this thesis. It is Bordwell’s study of the stylistic use of syuzhet that warrants further consideration in this thesis. For Bordwell the most important function of the syuzhet is its presentation of the fabula or the way it is anticipated that the viewer will construct the story. For Bordwell this involves questions of the construction of narrative logic, narrative time and narrative space (Bordwell, 1985: 51). For example, narrative logic in the syuzhet may be linear and advance in a causal manner, or it may be complex, using techniques of the avant-garde to disrupt the

traditional linear progression. Similarly narrative time may be chronological or use techniques such as flashback to disrupt the traditional flow of time. As Bordwell notes, narration “in classical narrative film technique, though highly organized, is used principally to reinforce the causal, temporal and spatial arrangements of the events in the syuzhet” (Bordwell, 1985: 275). As well, “the film’s Stylistics system creates patterns distinct from the syuzhet system. Films’ style may be organized and emphasized to a degree that makes it at least equal in importance to syuzhet patterns” (Bordwell, 1985: 275). It can be seen that Bordwell’s insistence on style as an integral part of the patterning of narrative reflects and develops the importance that the Russian Formalists placed on style in *Poetika Kino*:

The style of an art form might be roughly defined as the system or method of utilizing the artistic, technical and structural means belonging to a given art: verbal in poetry, painterly in fine art, etc. Thus, it would be natural to seek film style in the devices of visual expressiveness specific to film (Kazansky, 1927: 127).

Kazansky goes on to observe that if this were indeed the case – locating style in visual expressiveness – then one could consider the aspects of photogenic mastery, original use of cinematography, light, composition, framing etc as the true indicators of style. As he states this is not the case. Style resides in the Formalist notion of technique: “independent of all this, it is valued for its formal qualitative elements: it is a shot possessing stylistic significance” (Kazansky, 1927: 127). Bordwell extends the Formalist precept of the value of stylistic technique in particular in *Narration and the Fiction Film* (1985: 205 – 228; 274 – 310). In his Neo-Formalist discussion of the avant-garde in terms of art cinema or what he calls “parametric narration”, in films such as, for example, *Hiroshima Mon Amour* (1959) and *Last Year at Marienbad* (1961), Bordwell asserts that patterns created in the syuzhet may be discerned. These can include for example the use of colour, cinematography or graphics to organize the film and “frustrate our fabula constructing activity...(thwarting) the chief methods of managing viewing time – constructing a linear fabula” (Bordwell, 1985: 288). In effect the audience becomes so immersed in the style at the expense of narrative chronology that they must seek other patternings of the elements of film style for example – colour and cinematography – to make sense of the film.

In his Neo-Formalist focus on film style as one of the shaping forces of film form, Bordwell's approach to the consideration of cinematic narrative might seem to emphasize aesthetics over narrative. However it is the contention of this thesis that a consideration of the "poetic" features of visual narrative is the key element lacking in Structuralist narrative theory and new media theory in particular. While the film theorist Robert Stam sees Bordwell's theory as a "basting" of style over the syuzhet, thus neglecting a causal motivation of the fabula (Stam, 1992: 74), he does ultimately concede the importance Bordwell and the Formalists attribute to style. Stam believes that the consideration of stylistic or poetic features as the motivating factor of plot makes it difficult to deduce patterns of composition which may be applied to a variety of different texts across a variety of different media. Stam contends that it is

analysis which focuses on the specific, micro textual functioning of individual films, working against the goal of narrative theory to provide a comprehensive account of the laws of narrative structure which operate across the genres and across different media. Narrative analysis traditionally endeavours to disclose the deep structural patterning beneath the surface features of the artefact. It is the autonomy of the narrative structure from media specific manifestations that permits narrative forms to be translated into any medium (Stam 1992:75).

On the other hand Stam observes that "The exclusion of style for this reason by most narrative theorists is acknowledged by Bordwell, although his citation of Tynjanov as a theorist who includes 'stylistic linkage' in his definition of the syuzhet carries substantial weight" (Stam, 1992: 75). Stam continues to somewhat grudgingly accept that "the primary influence of Formalist thought on film narrative theory may therefore prove to be Tynjanov's argument that stylistic and semantic processes determine story categories" (Stam, 1992: 75). Indeed Tynjanov contended:

The style and laws of construction in cinema transform all the elements – all those elements which, it seemed, were indivisible, applicable in the same way to all art forms and to all their genres. Such is the situation of the question of story (fabula) and plot (syuzhet) in cinema. In resolving the problem of story (fabula) and plot (syuzhet) it is always necessary to pay attention to the specific material and style of the art form (Tynjanov, 1927: 95).

Although today the Formalists could be criticized for a lack of concern for meaning and interpretation in art, it must be remembered that like Aristotle they were writing in defence of literature and cinema as literary objects in the face of criticism that the purpose of art should be for purely philosophical or moralistic reasons. Moreover Shklovsky's observation that the structuring of plot or its "unique semantic modification" (Shklovsky, 1917: 21) can be regarded as a stylistic device is an important foundation of this thesis and elaborated in terms of the *Poetics of Mosaic Narrative* in Chapter 5. The use of complex plot structures in new media as a device of style has not been developed by contemporary Neo-Formalists such as David Bordwell even though he discusses how style can be interpreted as a "motivator" of plot in his discussion of the art film also discussed in further detail in Chapter 5 of this thesis. This alignment of narrative and systems of style as the motivators of plot in new media narrative is therefore an original contribution of this thesis to the literature of cinematic and new media narrative to be developed in Chapter 4.

3.22 Plot as Story and Style – The Role of Montage, Cinematurgy and the Mosaic Form

Research for this thesis reveals that the Russian Formalists, and in particular Boris Kazansky, were the first film theorists to discuss montage in terms of both narrative plot development and the stylistics of cinema as an art form as part of their poetics of cinema. While Sergei Eisenstein (1942, 1949) and other key Soviet Montage theorists and filmmakers like Kuleshov (1974), both theorize and apply montage techniques and theory in their work, it is Kazansky's commentary on the nature of cinema that really addresses the concept of editing and montage both in terms of narrative plot as well as stylistic development. What is of utmost interest in this thesis is Kazansky's unique concept of "cinematurgy" (Kazansky, 1927: 122-123). In "The Nature of Cinema", his contribution to *Poetika Kino*, Kazansky makes a number of observations about narrative, montage and style as they emerged as cinematic storytelling techniques in cinema in the early twentieth century that are relevant to narrative in new media in the early twenty-first century. In particular Kazansky coins the term "cinematurgy" as a term with which he intends to encompass the notion of "dramatic graphics" or "graphic drama" (Kazansky,

1927: 122-123). The concept of cinematurgy is of utmost importance to the study of cinematic narrative in new media. Cinematurgy and its notions of the dramatic as well as visual nature of narrative in cinema is the concept that Manovich has only partly addressed in consideration of the graphic nature of new media narrative, which Eisenstein attempts to address in *Film Sense* (1942) and *Film Form* (1949), and which, for example, films like *Run Lola Run* (1998) and *Amores Perros* deliver on all fronts – a total structural and formal integration of narrative, style, montage and mise-en-scene.

Kazansky contends that it is montage that is the most important aspect of film creation acknowledging that it is through the montage connection of various segments of narrative information, via the plot, that story is realised. But he also called for the art of cinema as portrayed through style to be recognized as an integral part of the creation of film (Kazansky, 1927: 120-121). As Kazansky's concept of the interrelationship of plot and the techniques of cinema as realized in montage, cinematography and mise-en-scene is so informative, rarely discussed and vital to this thesis, his thoughts are quoted at length:

A film demands a special treatment of the story, its segmentation according to specific principles of screen exposition. In this respect, the scenario gives only a schematic skeleton...The schema must be worked up in detail into its concrete formulation for the screen... shot is linked to shot in detail, taking into account the relationships and interactions of the shots with one another and with the ensemble of shots as a whole. This composition of the film is accomplished through *montage*, i.e. the arrangement of the necessary shots, according to their sense, into their sequence in the plot. The art of cinema in its final sense, i.e. the creation of the film, thus consists in principle entirely of the selection and combination of prepared photographic shots... just as the art of mosaic consists of choosing individual pebbles of different colours and shades in order to compose with them a preconceived representation... I want to underscore the purely structural, compositional, "plot" nature of this the highest stage of cinematic creativity, the creation of the film...montage in the sense we have given it is ... the basis and the crowning achievement of cinema creativity: montage is the 'dramaturgy' of film in its concrete, screen composition as a whole and in the construction of individual shots (Kazansky, 1927: 120-121). (Emphasis Kazansky's own).

Kazansky rightly emphasizes the fact that montage is the art of selection and combination. He also acknowledges that film segmentation is formulated according to the

principles of screen exposition as set down in a scenario or script. Additionally he acknowledges that a shot is an individual entity but also part of a whole. However he also notes that as for the art of mosaic, the choices involved in the art of the selection of shots from a “database” of material and the combination of shots in the articulation of a narrative is also one that relies on the mise-en-scene of each shot as well as that of the processes of montage.

The legacy of Kazansky’s reflection is his idea that it would be “very fruitful for establishing the basic principles of this unique dramaturgy of the screen which might be termed ‘cinematurgy’ to study the devices of sequential graphic presentation of the plot in illustration and in serial ‘narrative’ graphics in general” (Kazansky, 1927: 122-123). (Emphasis Kazansky’s own). However Kazansky goes no further in identifying what comprises this notion, noting instead that “Cinematurgy, whose aim is the creation of shadow screen drama, while remaining true to its graphic principles and the illustrative laws of its compositional media, must still work out on this basis its own devices for development of the plot on the screen” (Kazansky, 1927: 126).

A key work of this thesis is to investigate Kazansky’s eight-decade-old proposal that the crucial significance of the notion of *cinematurgy* is the key element of cinematic narrative. For Kazansky, “The highest stage, the creation of screen drama, *cinematurgy* [emphasis added] proper, consists only of the montage of the film, in nature purely compositional and plot oriented ” (Kazansky, 1927: 127). What is of crucial significance to this thesis is that Kazansky also conceives of cinematic narrative as a *mosaic*, the metaphor that has independently been proposed in this thesis as one that best describes the process of cinematic narrative construction. Also of significance is the fact, that like Eichenbaum, he identifies the importance of the interrelationship of the visual, narrative and dramatic nature of cinema but goes no further in a structural elaboration of these elements, rather leaving it to develop via the ongoing practice of the “cinematurg”. Instead of developing this “dramaturgy” of the screen in the last section of “Nature of Cinema”, Kazansky returns to the consideration of the role of montage and emphasizes the importance of montage as a means of plot construction but also as a means of the

construction of style. What is interesting here is that Kazansky specifically notes the importance of the concept of montage as extemporising both style and plot. It is this elemental and important aspect of a poetics of new media storytelling that has been undervalued in the representative exemplars of new media narrative considered in this thesis (Brooks, 1999; Mateas, 2002; Manovich, 2005).

As Kazansky noted of cinema during its emergence as an art form, the work of a poetics of cinematic digital narrative today addresses the same situation the Russian Formalists addressed: “In cinema we often see engrossing plots, skilful development of action, shots which are technically accomplished and well put together, but rarely do we sense any style. Of our own films, only *Battleship Potemkin*” (Kazansky, 1927: 128). Kazansky also includes Buster Keaton’s comedy films and two German films including *The Cabinet of Dr Caligari* (1920) which has been noted as an exemplar of the total integration of narrative and cinematic style. Ultimately according to Kazansky the paucity of the realization of style in cinema at the time was for the following reason:

The formulation of story using the expressive means of the screen already demands great ingenuity, experience, and effort on the part of the cinema artist, and in addition there remains the entire work of production. A dramaturgy of the cinema proper still does not exist (Kazansky, 1927: 128).

Just as Kazansky observed of cinema as it emerged as an art form, there are only flashes of well-developed cinematic digital narrative in new media today. These include the cinematics of the computer game, *Myst* (1993), the multiple storylines and style of the cinematic interactive non-linear narrative, *Of Day, Of Night* (Heyward, 2001), the immersive experience of the cinematic virtual panorama, *Eavesdrop* (Pledger and Shaw, 2004) and the coding and search engine of the cinematic database narrative, *Soft Cinema* (Manovich, 2005). But there is no one example that approaches the cinematic excellence and complex interweaving narrative and stylistics of films like *Run Lola Run* (1999) or *Amores Perros* (2000) which demonstrate that in the work of the best directors, “the most important aesthetic aspect” is the “composition of the shots and their unified dramatic conception” (Kazansky, 1927: 122).

PART III: TOOLS FOR A POETICS

“It is precisely now, while the traditions of the tastes and laws of Soviet films have still to be established, that we must arm ourselves with the correct theoretical arsenal so that we can more easily and productively embark upon producing the film that we need” (Kirill Shutko, Preface to *Poetika Kino* (1927)).

3.23 A Poetics Framework: Formalism and Structuralism

A Critical Methodology for the creation of a Poetics of New Media

Narrative

In this thesis two different methodologies of film theory are being drawn upon to develop a poetics of new media narrative termed the *Poetics of Mosaic Narrative*. Such a combination of methodologies is not traditional in film theory, nor is it unheard of. The roots of narrative theory are derived from two primary sources - Structuralism and Russian Formalism (Stam, 1992: 69). Stam believes that the key film theorist of the 20th Century to apply both Structuralist and Formalist theory to the study of cinematic narrative is the French theorist, Christian Metz (Stam, 2000: 53). Metz expanded and synthesized the insights of Saussurean linguistics and Formalist poetics in “Langue et Cinema” (1971). The combination of different theoretical approaches as a methodology for the study of cinematic storytelling has been validated via both film history and theory. Film theory has been characterized by drawing upon other disciplines such as literature, psychoanalysis and feminism to think about the cinematic experience (Stam, 2000). For example, Sergei Eisenstein, one of the first film theorists, drew upon the disciplines of social anthropology, psychology and psycholinguistics to construct his montage theories (Rosen, 1986: vii).

The essential difference between Structuralism and Formalism is that Structuralism is concerned with the elements of a structure and how they may be defined and described, and Formalism is concerned with the elements of an object and how they artistically function together to create a particular form. According to Bordwell, Structuralist theories of narratology are “feature centred” rather than “formal/functionalist” (2004: 203). Bordwell notes (as does this thesis), that Structuralist methodologies classify the features of a work. According to Bordwell in general Structuralist film narratology has not dealt with functional analysis. Rather the overall strategy of Structuralist theories has been to “distinguish basic units or features of narrative and identify their presence in

particular films” (Bordwell, 2004: 204). As Bordwell observes Structuralist narratology has continued the generally taxonomic enterprise of Propp, Todorov and Genette. “By contrast, a functionalist perspective links to a tradition that includes Aristotle, much work of the Russian Formalist tradition ... From this standpoint our effort to disclose principles governing narrative is guided by hypotheses about goal and effect” (Bordwell, 2004: 204).

In this thesis it is contended that to understand the features of a cinematic narrative and how it is independently structured as well as organically combined, is best assessed by assuming a Formalist approach as well as a Structuralist approach. Bordwell notes that a Formalist/functionalist “design stance” enables the researcher to pose the questions, “What purposes is the artefact meant to serve? How are those purposes manifested in the materials and structure of the whole? We offer that is, a functional explanation: we analyse the artefact’s overall form and explain it in light of the purposes we take it to be trying to fulfil” (Bordwell, 2004: 204). In conceptualising his notion of the “formal/functional” analysis of film Bordwell takes the analogy of a table fork. Bordwell asserts that there are various ways that a fork may be classified – by shape, size, composition of the handle etc. (This represents the Structuralist “atomistic” approach). But he contends, “Mounting such classifications might well prove useful, but, to explain why the features of the fork are as they are, we would also ask about the role they play in its overall design” (Bordwell, 2004:203). Bordwell continues by noting that in understanding that a fork is used to help us convey food to our mouths, we can understand why it has certain design features like the curved and sharp tines. Therefore as Bordwell goes on to observe that once we understand what the fork is designed to do – its “function” – “we understand certain design features better”. (Bordwell, 2004:203)

The Formalist or functionalist approach to film study defines film narration as the “organization of a set of cues for the construction of a story” (Bordwell, 1985: 62). This idea is at the centre of Bordwell’s own Neo-Formalist approach which further develops the original Russian Formalist concern with form and function in his

Cognitive Film Theory (Bordwell, 2002: 1-2). In essence Cognitive Film Theory builds on the idea that the spectator is assumed to possess a narrative competence that determines certain basic expectations based on a text's form and function. "To fulfil these expectations the text must solve a number of problems: initiate the appreciator into a world; create characters; suggest causal relations between events and states; monitor the flow of time and perform jumps across chronological sequence; express or inspire value judgements and so on" (Ryan, 2004: 197). Using such an approach in this thesis can thus complement what Bordwell sees as the basic problems of what he calls Neo-Structuralist narratology: "an excessively atomistic conception of narrative devices; an assemblage-based approach to the films that manifest these devices; and an implausible conception of how spectators make sense of narrative" (Bordwell, 2004: 204).

However having noted that one must consider the abstract as well as structural level of plot, it must also be noted that the Formalist and Neo-Formalist concern with the devices of narration - style and form, rather than the denominators of structure - leaves a gap in the concepts underlying the poetics of narrative in new media storytelling. Although Bordwell contends that Neo-Formalist poetics addresses "the theory and analysis of narrative ... (as) an elemental constructive principle in films" (Bordwell, 1989b: 5), his methodology in texts such as *Narration and the Fiction Film* (1985) does not analyse in systematic detail the narrative process involved in the construction of plot. In *Narration in the Fiction Film* (1985) Bordwell's key text on the methodology of Neo-Formalism, he acknowledges the basic features of narrative construction. But his focus is on the way these features establish the norms of the common story template around which the elements of film form and style function "to deploy meaning". According to Bordwell "the most common template structure can be articulated as a 'canonical' story format, something like this - introduction of setting and characters - explanation of state of affairs - complicating action- ensuing events - outcome - ending... goal orientation is a salient aspect of the schema of causality" (Bordwell, 1985: 35). This canonical story format is of course based on Aristotle's basic three act dramatic premise of beginning, middle and end.

Bordwell's Neo-Formalist film theory provides an excellent tool with which to analyse and categorise the formal and stylistic parameters of new media narrative. But like Formalist film theory it is lacking in any detailed consideration of the structural elements of film in terms of the narrative processes of film as a language. Bordwell contends that the original Russian Formalists "did not compare language as a system to cinema" (Bordwell, 1985: 17-18). As he rightly asserts and as is noted above, the Formalists did study syntactic devices such as parallelism and the semantic effects of metaphor, "but they did not construct a comprehensive model using pertinent linguistic categories" (Bordwell, 1985: 17-18). However it does seem that Eichenbaum inadvertently refers to why the Formalists prefigure the Structuralists when discussing the rhythmic-syntactic of verse: "I did not examine the rhythmic-syntactic phenomena in isolation, but as a part of an examination of the structural significance of metrical and vocal intonation" (Eichenbaum, 1926: 125). Eichenbaum could be seen to thus make a link between Structuralism and Formalism well before Metz's *Grande Syntagmatique*. As Bordwell observes it was not until "French Structuralism and semiology emerge do we find critics employing linguistic theory to analyse film" (Bordwell, 1985: 18). Bordwell gives a brief account of the impact of Structuralism on cinema studies (Bordwell, 1985: 18 –20). He acknowledges that the syuzhet may always be segmentized and makes passing note of Metz's classification of montage sequences in the *Grande Syntagmatique* (Bordwell, 1985: 158). However Bordwell's major focus in his Neo-Formalist theory of film is on the development of the schemata (sets of cinematic systems) and perceptive processes involved in comprehending the narrative and stylistics of both classical Hollywood and avant-garde film (Bordwell, 1985: 31 – 32).

3.24 Structuring Story and Form: The Role of Audience Design

In using a film theory approach to study narrative it would be easy to become immersed in the intricacies of narrative structure and form, and to forget why the scientific approach engendered in narratology is used to consider the role of structure in storytelling. First and foremost stories are told for a number of reasons – to entertain, to inform, to give a unique interpretation of a particular event or to highlight a cultural or moral issue that is best dealt with in a fictional genre. One of the critical issues in this thesis is that in spite of new media technology, it is still the stories told in the screen based electronic world of cinema, television and computers which appeal to one of mankind's most potent desires – the need to interpret, learn from or relate to reality in terms of narrative. Narrative as a framework for a consideration of the fictional choices or desires we may make in our lives, as reflected through the story of other lives, thus serves a very real purpose in our lives (Branigan, 1992: 217).

Here once again it must be remembered that stories don't invent themselves – they are the considered and carefully crafted work of the artist. Therefore whilst using the systematic, abstract and theoretically rigorous tradition of Structuralist narratology (Lodge in Herman, 1999: 7) as a scientific approach to the study of narrative, it must be remembered that the role of the storyteller is not addressed. This is in effect the deliberate construction of narrative to achieve specific effects – what Herman terms “the role of audience design” (Herman, 1999: 11). “At stake are the ways in which storytellers structure narrative discourse to promote certain kinds of interpretative – cognitive, emotive, evaluative-responses” (Herman, 1999: 11). Structuralism per se does not address how a new media designer can take the complex knowledge of the Structuralist building blocks of story to the next step, using them for writing and creating emotionally engaging stories. Even though a Structuralist approach is being applied to the understanding of narrative it must be emphasized that an analysis of structure is not merely a scientific exercise but rather a means of understanding why and for what purpose the storyteller has assembled the events of a story:

The principles of structure that each playwright employs – and every playwright employs some – reveal his particular dreams, his philosophy, his vision. His vision, then, controls his selectivity. And his practices in selecting material are as significant as the structural principles he accepts (Smiley, 1971: 295).

As the dramatic theorist Smiley observes structure is the deliberate construct of the author, and it brings to life the way in which the author seeks to emotionally engage the audience. Aristotle made the same observation in the *Poetics*: “A perfect tragedy should, as we have seen, be arranged not on the simple but on the complex plan. It should moreover imitate actions which excite pity and fear, this is the distinctive mark of the tragic imitation” (Aristotle, *Poetics*, Section 2: Part XIII: 9). For scriptwriters like Robert McKee the dramatic arrangement of plot or dramatic structure can also be seen in Aristotelian terms – the effects it enacts on the audience. “Structure is a selection of events from the characters’ life stories that is composed into a strategic sequence to arouse specific emotions and to express a specific view of life” (McKee, 1999: 33). It must not be forgotten that as was the case for Aristotle in the original *Poetics*, the ability to appeal to an audience is the result of the inner structure of the piece (*Poetics*, Section 2, Part XIII: 10).

In summary then, to fully consider the features, forms and functioning of new media narrative it is useful to use both a Formalist and a Structuralist approach. In looking at new media storytelling to isolate and categorise its elements, a Structuralist methodology enables the development of a taxonomy of its essential features. On the other hand a consideration of how these elements may be designed and delivered as new media narratives, their strategic functional principles, requires a Formalist methodology which starts “from the premise that a film operates as a whole, its individual parts playing determinate roles in a larger pattern” where according to canonised roles “this principle of large-scale form seeks to elicit certain effects...the issue is not what the image is intrinsically but how it is mobilised within the temporal scheme of the overall film and how spectators, armed with certain default values and norms, can make sense of it” (Bordwell, 2004: 209-214).

Taking as an example of the Structuralist/Formalist approach the opening shot of the multiform narrative film, *Amores Perros* (2000) discussed above, one may consider the dual application of these methodologies. As a structural component this is an introductory or expository sequence – it sets up the location and time of the film – a hectic day in the bustling crowded world of the slums of Mexico City. Additionally in terms of narrative function it plays a number of roles. Taking the Formalist, functionalist approach it sets up many of the devices of the film – the cinematography of the handheld camera, the crowded and dingy mise-en-scene of the lower classes who fight every day for their survival, the rapid fire editing of the frantic car chase in this frantic world. This opening sequence where Octavio is speeding to save his bloodied dog Cofi, who has been mauled in the rigged dogfight, is viscerally rendered via cinematography and mise-en-scene. In Aristotelian terms this sequence offers the audience both the thrill of the car chase and engenders pity for the injured dog. Using Aronson’s parallel narrative theory this is the pivotal scene or climax (even though it is the exposition) – it results in the climatic car crash which affects the lives of all the characters. Octavio’s best friend is killed, Valeria is injured and loses one of the legs which have made her the pin up girl of the fashion world and El Chivo rescues the dog who will in turn destroy his surrogate family – the band of stray mongrels who live with him in his shanty.

To study *Amores Perros* from a single perspective would undervalue the artistic complexity of this film and the elements of structure and form functioning together. If one is to think about coding a segment with all its storytelling properties it is asserted that the combination of Formalist/ Structuralist methodology is important because, “while taxonomies are useful, they help most when governed by a sense of the film’s overall formal principles ... and the purposes for which norm and form recruit specific narrative devices” (Bordwell, 2004: 217).

3.25 New Media Narrative- the Status Quo

In the new media environment the way that stories are told is different from the way they are told in old media - not new. Notions of interactivity, non-linearity, immersion and agency dominate the research agenda due to the digital, modular and hence re-configurable nature of narrative in the digital environment. The question is not really how can new media enhance the cinematic experience but rather how can new media narrative be enriched by the application of the art of cinema?

In the literature heralding the potential new forms of new media narrative, Murray's persuasive rhetoric, in the metaphorically evocative concept of the Shakespearean character Hamlet, immersed in a *Star Wars* inspired *holodeck*; combined with Laurel's proposal for an integration of the principles of dramatic storytelling with computer authoring systems; have proved powerful forces in shaping the development of new media storytelling. As key New Media theorists both Laurel and Murray are unique in their overt recognition of the role of the writer in envisioning and designing narrative. Both also closely align the art of writing for new media narrative with dramatic theory or cinematic practice – Laurel in her call for an Aristotelian inspired design of human-computer interaction and Murray in her literary and cinematic allusions - the image of the holodeck. However both Laurel and Murray write of an illusionary world - it has been too easy to forget that the world they envision is a dream. Nonetheless it is a dream that has been highly influential in shaping the narrative and new media research of two of the most prestigious university research centres in the world - MIT Media Lab and Carnegie Mellon University. But this research has focussed on software design rather than story design.

In the search for interactivity the writing of computer programs is continually developing and there exist a number of programs capable of driving the *Mosaic Narrative* experience. There have been significant research projects that have contributed to the emergence of this new art form and a number of significant doctoral research projects,

primarily in the area of software design, which have attempted to develop story engines for new media storytelling. These include Kevin Brooks' MIT Media Lab development of *Agent Stories* (1999) and his concept of the metalinear story engine for manipulating simple text based short stories, Nicolas Szilas' (2003) *IDtension* narrative engine for interactive drama, an artificial intelligence generated structural authoring system for use in story generation and participation, and Michael Mateas' story architecture for the interactive drama, *Façade* (2002). It is recognised that the development of software is a complex issue and necessitates intensive and time-consuming research. Mateas and Stern (2005a) state that many person years may be involved in the creation of suitable software:

During the production of *Façade*, within our "limited" authoring effort (beyond the building of the architecture, *Façade* required ~3 person years of just authoring, which is more than a typical art/research project but far less than a typical game industry project)... combined with the reality that the time required to design and author narrative behaviours is substantial ... (Mateas and Stern, 2005a: 6).

However as research in this area continues to develop, this project assumes that the software such as *Agent Stories*, Mateas' *Façade* story architecture or database story engines such as that which Manovich is developing in *Soft Cinema* (2005) using Microsoft Excel (Manovich, 2003) exist, or will exist, to "drive" the *Mosaic Narrative* search engine.

3.26 Conclusion

In the preceding chapter it was noted that the *Poetics of Mosaic Narrative* is a systematic study of the cinematic and narrative properties of storytelling in a computer based digital environment. The basic premise of the "poetic" methodology, which posits that the elements, overall patterns and structures and their combination and articulation in an artwork are revealed as a complementary and complex entity carefully orchestrated by the artist, was established.

In this chapter the paradigms of Aristotelian and Formalist Poetic and Structuralist cinematic theory which are considered as relevant to examining the state of cinematic new media narrative, have been established. The complementary use of the tools of Formalism and Structuralism for the examination of the “language” of new media serves as a firm basis for the development of a poetics of new media in this thesis. These tools include the application of the Aristotelian concepts of unity, dramatic structure and the use of “language” as a stylistic device designed to engage and manipulate the audience’s attention. They also include the Formalist concept of the poetics of cinema – the considered use of the elements and devices of cinematic storytelling – mise-en-scene, editing, cinematography, and style – as essential elements of storytelling in the cinematic domain. Finally they include the Structuralist concepts of narrative structure and the ramifications of the linear and syntagmatic articulation and combination of discrete segments of narrative data in the process of narration. This dual methodology is particularly appropriate in the analysis of cinematic new media narrative where the cinematic effect depends on the organic nature of its elements: narrative form and cinema’s architectural and stylistic arrangements all working together.

The Formalist focus on the creation of cinema as an object of art and a means of appealing to an audience forms the basic framework for the poetics of new media narrative as embodied in the *Poetics of Mosaic Narrative*. It is the Formalist emphasis on style as a key part of the process of narration that theoretical treatises (Manovich, 2001, 2005; Laurel, 1993; Murray, 1997; Aarseth, 1997; Mateas, 2002) and practical exemplars of new media narrative have failed to address. The importance that Bordwell and the Formalists place upon style as a motivator of plot as well as an aesthetic element of a film is of crucial importance in the operation of the syuzhet or the processes of narration via which the fabula is told. As was elaborated in this chapter, Bordwell sees style as playing an integral role in the unfolding of the action as part of the syuzhet: “In the fiction film, narration is *the process whereby the film’s syuzhet and style interact in the course of cueing and channelling the spectator’s construction of the fabula*” (Bordwell, 1985: 53) (Italics Bordwell’s own).

To address the challenge of marrying the complexity of creating cinematic storytelling with the digitality of new media, in Chapter 2 it was contended that Lev Manovich's work is of vital significance to the discussion of the poetics of new media narrative as he is the key practitioner and theorist to research new media narrative in cinematic terms. It is Manovich's concern with the emerging forms of narrative as contemplated in *The Language of New Media* where he explores these "new kinds of narratives" arguing that the variable, modular and hierarchical nature of new media narrative is leading to the emergence of new media narrative forms, in particular a form of new media narrative he terms database narrative (Manovich, 2001: 237) and his artistic practice that is of vital interest. In *Soft Cinema* (2005) Manovich experiments with the development of database narrative by building databases of narrative material that can be accessed by a search engine encoded with the paradigms of storytelling.

In the following chapters, Chapters 4 and 5, Formalist, Neo-Formalist cinematic theory and Structuralist narratological theory, both as academic and craft based theories, are employed to consider in turn, the material nature of the digital text, the structural and formal nature of new media narrative and the implications of these for a poetics of new media narrative as derived from a study of Lev Manovich's practical work in *Soft Cinema* (2005).

CHAPTER 4: FORMULATING THE THEORETIC BASES OF THE POETICS OF MOSAIC NARRATIVE

Introduction

In this chapter the foundational premises of the *Poetics of Mosaic Narrative* - the formal and structural properties of the narrative segment in new media narrative - are established. The basic principles underlining the next two chapters are derived from an extrapolation of the Russian Formalists' concern with the way in which cinematic narrative is articulated in the telling of a visual story. It is recalled that Shklovsky advocated the consideration of plot as both sequential development and as a combination of the devices of plot construction and style (Tynjanov, 1927: 95). Eichenbaum favoured what could be termed a more Structural approach to the segmentation of narrative coining terms such as the "film phrase" and the "film period" to denote the basic unit of film language (Eichenbaum, 1927: 73). Kazansky favoured a more avant-garde approach and was concerned with style as the chief motivator of plot (Kazansky, 1927: 120). As noted above Kazansky also theorized that a film is a "mosaic" created via the process of *cinematurgy*, the complementary integration of the elements of graphic composition and plot as combined and articulated via montage (Kazansky, 1927: 127). These ideas about plot form and structure are not purely theoretical concepts – they are the tools of the artist. The dramatic theorist, Smiley contends:

In art, form is the organization of parts into a whole. And to create organization, every artist employs, however consciously, certain principles of order and arrangement. As he particularizes such principles in a specific work, that work assumes a structure, a set of relationships that join the parts to form a whole. Hence in any artwork, form is a particularized structure. And a drama's structure is its form, its organization, its plot (Smiley, 1971: 71).

In this chapter an examination of the "parts" which contribute to a new media narrative commences at the level of the narrative segment which in this chapter is termed the *Digital Narrative Syntagma*. The "principles of order and arrangement" that contribute to the structure and form of cinematic new media narrative are explored as they are activated at the point of montage, which in this chapter is termed the *Story Moment*.

These principles are examined in terms of the features of classic narrative structure – time, space and causality. In the latter part of this chapter the “set of relationships” that Smiley asserts works to “join the parts to form a whole” is proposed in terms of the Formalist concept of *cinematurgy* as the motivator for both narrative and stylistic structure and form. In this thesis Kazansky’s concept of *cinematurgy* is developed to apply to both the *dramaturgical* and *cinematic* properties of cinematic new media narrative. Dramaturgical structure and function refer to the operation of the syuzhet as it unfolds using the classic three-act Aristotelian structure as it applies to both simple and complex parallel narrative forms. Cinematic function refers to the systems of style developed by the use and patterning of mise-en-scene, cinematography and montage built up via the operation of the syuzhet at the Story Moment as it builds systems of style as motivators of narrative progression.

In the development of these principles Manovich’s theory regarding the concept of narrative as a cultural form and narrative as a form of user access and a means of engagement with representational digital data is of particular relevance. In particular, Manovich’s conception of the database as a cultural form and his theoretical validation of his ideas in the *Language of New Media* are analysed. A Structuralist and Formalist analysis of Manovich and Kratky’s *Soft Cinema* (2005) project and its relation to Manovich’s theory is effected to develop the cinematurgical principles of the *Poetics of Mosaic Narrative*.

4.1 The Storyteller and the Search for a Theory of Digital Storytelling

In discussing her artistic process the award winning Australian artist and academic, Megan Heyward, also ponders the question of how to create the structure and form of a new media narrative:

I came to realize that the way to structure it would be to create a narrative of fragments, like a composition of narrative fragments that I interweaved and interlinked with each other. But the person that’s using the project is the person that creates the meanings through associating all the fragments together...But I’d also like to look at exploring other ways of structuring and

conveying the work. Still with fragmentation, and still a composition of fragments. But maybe not expressed in quite the same way (Heyward, c2000: 2)

The notion of segmentation (Manovich's modularity) and combination that Heyward ponders is not new to narrative nor cinematic theory but the fact that discrete segments can be described and codified for digital manipulation (Manovich's variability and automation) is new to the various genres of new media storytelling. As noted above, these features mean that a unit of new media narrative may be described on a number of levels including narrative function, stylistic attributes and digital code. In order to define the narrative and cinematic parameters for this codification there is a need to be specific in the descriptors of the structure and function used to create the parameters for the segmentation of narrative. It has been determined that Formalist and Neo-Formalist theories of film can assist in discussing the poetics of new media narrative in terms of form and function but these theories fall short in describing the structural components of narrative. For this reason Structuralist theory is used to provide a more detailed system of classification of the structures of narrative, a system that is useful for developing a typology of the elements of a new media narrative poetics.

In this chapter the first step in considering the systemic functioning of narrative in a form like database narrative is to study and apply a method of classifying and indexing Manovich's "elements" of the database so that they address their potential narrative role. To this end, Manovich's database narrative, *Texas* (2004), a cinematic new media narrative that forms part of Manovich and Kratky's *Soft Cinema* (2005) project is examined below. What is of most importance in the *Soft Cinema* project is the fact that each of the stories that it contains is activated by a computer "on the fly". This is different from, for example, a new media narrative like Heyward's *Of Day, Of Night* where the potential narratives already exist as pre-set story pathways awaiting activation by the user. In *Soft Cinema* the story that is told is potentially different every time as a coded computer search engine selects coded material from a database in real time. In examining the cinematic narrative parameters which are used to code both the database and the search engine, one may begin to understand how the fabula may be rendered by

the syuzhet in new media narrative in a multitude of structures and forms to produce truly interactive narratives.

4.2 New Media Narrative – *Soft Cinema* (Manovich, 2005):

A Case Study of Narrative as Database and the Implications for New Media Narrative

This case study focuses on Manovich's contribution to the *Soft Cinema* project - *Texas* (2004). In this section a brief overview of the *Soft Cinema* project is presented.

- (a) Project Outline: *Soft Cinema: Navigating the Database* (2005) is a DVD project specifically designed to explore “the new structures of production and consumption enabled by computing” (Manovich and Kratky, 2005: 1). The original *Soft Cinema: Navigating the Database* was screened as part of the *Soft Cinema* installation at the exhibition, *Future Cinema: The Cinematic Imaginary after Film* (2002) at ZKM Centre for Art and Media, Amsterdam. As a digital installation it featured digital films assembled and projected in real time. *Soft Cinema* digital narratives were designed to run indefinitely, never repeating the same sequence of edits. The published version of *Soft Cinema* on DVD accessed for this thesis consists of three database narratives, *Mission to Earth* (Manovich), *Absences* (Kratky) and *Texas* (Manovich). This DVD version purports to capture a number of specific software “performances” or “takes” of the original installation. It is programmed to navigate between the various “captured” versions of any one film. Manovich and Kratky state, “Not everything will be different with every viewing but potentially every dimension of a film can change, including the screen layout, the configuration and combination of the visuals, the music and the narrative” (Manovich and Kratky, 2005: 2).
- (b) Structure: *Texas* (2004) is an experiment in database aesthetics and features multiple databases of voice-over narration, music, soundscape and graphics. The *Texas* database creates a narrative in real time by assembling the visuals, character identities and sounds from these multiple databases when accessed by the user. One database includes 425 short video clips shot in cities all over the

world. These clips are designed to capture the iconography of the “global city” (Manovich, 2005: 8). The music database has been created to parallel the video database. Elements of both these databases are “correlated” using the assigned descriptive parameter of “type of space”. For example, these descriptions include: “city view”, “space with (computer) screen”, “private interior”, “object”(eg cup) and “working with (computer) screen”. The soundtrack database or what one could term “soundscape”, utilizes music from different music traditions, cultures and genres, and sounds from different kinds of environments. The concept behind the “assemblage” of *Texas* is therefore virtually no different from creating any film. What is different is that in any one “screening” of *Texas*, the actual film that is “viewed” has been assembled “on the fly” by the computer itself. In the *Soft Cinema* project, it is the process of coding, selection and correlation that Manovich is researching that is of crucial importance. Manovich envisages narrative as being the search engine or “driver” of this selection process.

- (c) Concept: According to Manovich, *Texas* represents “the subjective experience of a person living in a global information society” (Manovich, 2005: 8). Manovich sees *Texas* is an attempt to visualize mankind’s daily interaction with “volumes of data and numerous messages” – the sense of living “between layers” without “resorting to already normalized modernist techniques of montage, surrealism and the absurd” (Manovich, 2005: 8). For Manovich the film “exists at the intersection of a number of databases each of which is structurally organised in the same way and each of which can be thought of as a portrait of a contemporary ‘global layer’” (Manovich, 2004: 8). It is observed that Manovich’s story concept, that “of subjective experience” and the visualization of “daily interaction with volumes of data” is something of a “catch all” - lacking any sense of the narrative structure of storytelling. If such a concept is purported to be a narrative, virtually any interaction with the world could be seen to be a narrative.

- (d) Access: *Texas* was viewed for a total of three times for the research of this thesis. In the three different viewings of *Texas*, a ten-minute video was generated.

In each narrative exactly the same set of clips was selected and generated as “the narrative”. Research into whether this was a “one off” event or whether this is a fault with the program is beyond the scope of this thesis. However the “narrative” thus generated is worthy of close analysis.

- (e) The Narrative: The basic story of *Texas* runs like a series of observations made by a third person narrator. In each observation a narrator recounts what people in the film are seeing or doing, for example, noticing the number of American versus Japanese cars. In one clip massive crystal-like stalactites can be observed hanging in space. In another clip a waiter and a Chinese girl working in a restaurant are observed. In the next clip a man and woman enter the restaurant and are seated. They each order a drink. The man and woman sit and the audience is made privy to visions of their private thoughts, as they seem to ignore each other. The woman toys with her drink while she reminisces, recalling her childhood home in Sweden or her life in Korea. The man plays with a mobile phone that fails to operate. Suddenly the crystals seem to come to life. They appear to invade the restaurant, crashing through the glass. The man tries to phone for help but it is obvious there will be none, as the phone doesn't work...
- (f) Form: In any one clip of *Texas* three different windows of information, displaying three different versions of the action are screened. In *Texas* the action of the story is displayed in one window. In a second window a “cutaway” of some part of the action is screened. In a third window motion graphics are displayed. In some cases these are animations and in some they are short “grabs” of the voice-over which also run across the screen in text form.
- (g) Style: Montage, Cinematography & Mise-en-scene: The *Texas* clips that were selected and run were all consistent in terms of location, content and visual aesthetics. These clips were either shots of the interior of a restaurant or a building, or shots of a city. Some included shots of the waiter, the man or the woman. All interior shots were imbued with the semi-saturated colour of video.

All exterior shots of the global cities were imbued with a blue/grey hue. Referring to the video content table (see Table 4.1 below) it is noted that each video clip (approximately 1.5 minutes duration in the DVD version) is categorised by location descriptive and aesthetic. The descriptors encompass ten parameters including, for example, geo-location (country), type of location (city view, pub interior etc), and the various cinematic qualities of the image including, brightness and contrast, degree and type of camera motion, camera distance or shot framing.

(h) TABLE 4.1 *Soft Cinema Clips – Texas* (Descriptive parameters)

Available at <http://www.softcinema.net/form.htm>

(Select Video database – keywords view)

4.3 An Analysis of *Texas* – Structure and Form

Texas may be examined at both the structural and formal level. Structurally *Texas* is a new media object which is an innovative and successful exemplar of the database form. *Texas* is intricately structured with carefully indexed and coded databases comprised of segments of information that are coherent and relevant to the “narrative” concept. *Texas* presents a computer-generated sequence selected from a database of segments of images, music, sound and graphics. Each of the elements of the database function to contribute to the overall cinematic experience that is *Texas*. As an example of the technology of multimedia image and sound generation in a narrative context, *Texas* is highly commendable. As an aesthetic experience *Texas* is impressive – the multiple windows of information convey the impression of living between the layers of the global city that Manovich aimed to create. However as a story *Texas* is trite and banal. It lacks dramatic and narrative coherence. *Texas* may be classified as an avant-garde narrative with its sense of surrealism but this is what Manovich deliberately sets out to avoid – his aim is to create database narrative – in his own words without “resorting to already normalized modernist techniques of montage, surrealism and the absurd” (Manovich, 2005: 8).

Manovich’s tabulation of the structural and formal parameters of the narrative segment in *Soft Cinema* is as yet quite under-developed and effectively short changes any potential narrative to which these segments may contribute. Manovich’s descriptors of the potentially constituted segments of *Texas* address the most basic of the parameters of narrative. Manovich’s descriptors of the action of the video clips of *Texas* are purely descriptive categories rather than functionally specific. These of course suit Manovich’s use of Bal’s narrative categories as “a series of connected events...experienced by actors” (Bal quoted in Manovich, 2001: 227). For example, these descriptors read: “people walking outside train station”, “view out a train window” or “objects in a café”. In cinematic terms they could be regarded as part of the “setting up” or exposition found in Act 1 of any narrative but Manovich does not annotate them so. A further analysis of Manovich’s descriptors reveals a similar pattern. These include: “girl at computer with

purse”, “boy at computer in thought”, “people standing around a meeting table”, and “in car looking out side window”. These descriptors are delineated further by type of location, for example, “city view”, “pub interior” or “space”; by camera distance, for example, close, medium, far; by camera motion, for example, forward or left; and by file name, coding, grey scale and contrast. However none of the descriptors refer to the narrative function of the video clip - a parameter that could be addressed in Structuralist terms by using, for example, the Proppian model of plot function to code each of the discrete elements.

If the clips of the *Texas* database were to categorised using the Proppian model of plot discussed in Chapter 3 to encompass the notion of narrative function, an answer to the question, “How is this shot or segment going to progress the narrative?” could be tabulated to devise a narrative purpose for each segment. By adding a narrative function to the *Excel* table used to tabulate the parameters of each clip of *Texas*’ feeder databases, Manovich could add the next level of complexity and therefore narrative potential to *Texas*. For example, the clip entitled “people standing around meeting table” could be annotated as Propp’s function “a” - “villainy” using Propp’s model. “Boy at computer in thought” could be similarly annotated as function “E” - “reaction of the hero” or “man with palm pilot” could be labelled as function “F” – “the acquisition, receipt of a magical agent”.

4.4 Narrative as Data – the Digital Narrative Syntagma

Manovich essentially reduces the components of digital narrative to the data – the descriptive, and the method of information access – the narrative or “a new key category of culture” (Manovich, 2001: 217). Although Manovich does invoke narratology and cites the distinction this branch of literary theory makes between description and narration, Manovich’s concept of how the precepts of narratology may be applied to narrative in new media is flawed, as what Manovich takes from narratology is the notion of narrative as a static description, rather than a functional event. Despite these inadequacies and inconsistencies Manovich’s conception of narrative as data represents a

sound practical basis upon which to develop the *Poetics of Mosaic Narrative*. It is Manovich's observation that the database is a "structured collection of data" that can be indexed and cross-referenced any number of times that makes Manovich's theory so important as a basis for informing a poetics of storytelling in new media. However as noted previously, the key element missing in Manovich's theory is his resistance to a Structuralist analysis of the discrete elements and processes involved in new media storytelling. Despite what Manovich says avowing his disregard for Structuralism, his self-contradictory thesis does enable one to conceive of and apply a Structuralist methodology to isolate the essential elements of a narrative database.

The observation for the need for segments of narrative material to contain both a Structural description of its content and a Formalist notation of its function builds on both Manovich and the Russian Formalists' conception of segments of film encoded with data. It leads to the tabulation of the first essential element of the *Poetics of Mosaic Narrative*:

The basic unit of narrative function in new media narrative is the Digital Narrative Syntagma. This segment is encoded with both descriptive and functional narrative parameters activated by algorithmic behaviour in the digital environment.

While this observation is perhaps self evident, as has been seen from an analysis of Manovich's database narrative *Texas*, the identification of narrative functionality is the key element missing from Manovich's research. However despite this observation, it must be noted that the *Digital Narrative Syntagma* is merely an element of narrative, isolated for the purpose of analysis – what Bordwell would term an "atomistic" Structuralist analysis. As a functioning unit of narrative one must consider how this unit combines with other units of narrative at the point of interaction to tell a story. This brings into play the necessity to consider the ordering of the *Digital Narrative Syntagma* in terms of narrative (including spatial and temporal roles), dramatic and cinematic function. In the next section the way in which Manovich perceives narrative as a search engine to generate varying versions of *Texas* is considered. In particular the implications

for the ordering and linking of the *Digital Narrative Syntagma* in terms of the parameters of dramatic causality, time and space are addressed.

4.5 Making the Connection - *The Story Moment*

The next consideration in the development of the *Poetics of Mosaic Narrative* is the conception of narrative as a search engine that uses a framework as a tool to select segments of narrative from a database of material. As noted above the validity of a poetics as a tool with which to create and artwork is based on the Aristotelian tradition. Aristotle first pointed out that in creating a mimetic artwork, the playwright - in the new media scenario the designer - envisions a unified whole, selects appropriate elements or materials, arranges them in a dramatic form and expresses both form and content through language as enacted via plot. As was also noted in Chapter Two, for Aristotle of all the elements and materials of tragic drama, Aristotle considered plot to be the most important because “on actions again all success or failure depends” (*Poetics*, Section 1: Part VI). Therefore in this thesis in the Aristotelian tradition, it is plot – the “forming” of structured cinematically represented action that has been the focus. For the new media designer the elements that impact upon and are comprised in the creation and articulation of segments of “plot” or the *Digital Narrative Syntagma* are the elements comprising the “language” of new media. It is recalled that in this thesis the language of new media encompasses the principles of new media representation as theorised by Manovich; the principles of dramatic narrative structure as theorised by the French Structuralists, Barthes (1977) and Metz (1974) and the Structuralist influenced scriptwriters McKee (1996) and Aronson (2000a); and the language of cinematic representation – cinematography, mise-en-scene, and montage - as theorized by the Russian Formalists (1927) and the Neo-Formalist, David Bordwell (1985, 1986).

The next important decision to be made in the articulation of this language as posed by this thesis is: “How to join or configure the elements of this language in the articulation of narrative?” In film terminology the juncture between two segments of film is termed “the edit point” which is essentially the crucial moment of “interaction” of all the

elements of film in terms of story, style, structure and form. In the process of editing in both narrative and Formalist terms the filmmaker has a number of considerations regarding the narrative and artistic implications of the edit point - what in cinematic history was the result of physically splicing two segments of celluloid film together. The linking of narrative via the process of editing and montage is a complex issue and indeed has been the subject of intensive research from both an artistic and technical perspective (Eisenstein, 1942, 1945; Balazs; 1948; Arnheim, 1958; Armes, 1994). It is not the brief of this thesis to conduct a large-scale investigation of this process as indeed for Eisenstein, for example, the theorization of montage amounted to a life's work. Hence a brief consideration of the theoretical and practical implications of editing and montage as the basis for highlighting the importance of the decisions made in the process of the linking of narrative as a story and as an artistic object is undertaken in the following section.

If the view is held that the comprehension of narrative is a cognitive process, as posited by the Russian Formalist, Eichenbaum (1927: 62) in his concept of "inner speech" and strategically developed by David Bordwell (2002) in his Neo-Formalist Cognitive Film Theory, it is understood that the formation of semantic units and their linkage is the very essence of narrative, as it is by comprehending these links that the viewer makes sense of narrative material. As Eichenbaum asserts, "the meaning of individual shots gradually becomes clear because of their contiguity and sequentiality" (Eichenbaum, 1927: 78). For these reasons the narrative ordering or patterning and linking of film in terms of the choices to be made at the point of edit or montage has important implications for the decisions the new media designer must make at the point of linkage. It is evident that the principles of ordering and arrangement of narrative in new media and the set of relationships they build are dependent upon a number of factors inherently narrative and cinematic.

Firstly, the ordering of narrative is dependent upon its overall form – the type of story the author is trying to tell – whether it be a classic narrative or a narrative that is more avant-garde in structure. Secondly, it is dependent upon the actual order the designer chooses to

unfold the narrative – either chronological or non-chronological. Thirdly, it is dependent upon the narrative function of the segment and its place as a result of the effects of causality. Finally, it is dependent upon both the metaphorical and technical aspects of contiguity, which are rendered in terms of filmic technique and style as discussed in separate detail in the next chapter.

In this thesis the point of linkage, or the “edit point” in new media cinematic narrative is termed the *Story Moment*. In the *Poetics of Mosaic Narrative*, the *Story Moment* is therefore the point at which crucial decisions affecting the causal, temporal, spatial and stylistic patterning and development of a cinematic narrative are made. It may occur at the end of a scene or syntagma as identified by Metz (1974) in the *Grande Syntagmatique*, or at the end of a sequence of narrative function such as that identified by Porter et al. (2002) in the *Scene Function Model*, or at a “turning point” – a moment of critical decision making for the protagonist in the classic three-act structure as identified by Aronson (2000a: 74-77). In all instances the *Story Moment* is a key point of interaction of the elements of new media language in terms of Bordwell’s expression - the “architectonics” of the film’s presentation of the story (Bordwell, 1985: 50).

In the remainder of this chapter the implications of the parameters of new media narrative that impact at the *Story Moment* are considered by way of Manovich’s theory and practice as exemplified in *Texas*. This discussion is prefaced with the largely forgotten or obscure, yet insightful and highly relevant insights of the Russian Formalists.

4.6 The *fabula* and *syuzhet* in New Media Narrative

As discussed in Chapters Two and Three, the Russian Formalist concept of *fabula* and *syuzhet* or Bordwell’s more contemporary concept of narrative and narration, have been utilized to consider the concept of narrative as an object and narration as a process in new media narrative. It was established that the *fabula* is the story of the film. The *fabula* is cognitively inferred and may involve the comprehension, assumption or understanding of events that do not even occur on screen. However it is generally comprehended by the

audience as a chronological sequence of causally related events, whether or not it is presented in this way on the screen (Bordwell, 1985: 49-50). It was also established that the syuzhet is the plot of the film, the vehicle by which the fabula is represented and rendered in real time. It is recalled that Bordwell emphasized the fact that the syuzhet is a system “because it arranges components – the story events and states of affairs – according to specific principles ” (Bordwell, 1985: 50). The systematic use of the principles of the syuzhet or the process of narration – narrative causality, the construction and rendering of time and space and the construction and rendering of style – as systems that can be programmed in terms of the metalanguage of the poetics of cinematic narrative - is the next concern.

It is pertinent to note that this was also the Russian Formalists’ concern. Kazansky contended that the segment of cinematic narrative should be treated and schematised “according to specific principles of screen exposition”. Kazansky asserted:

A film demands a special treatment of the story, its segmentation according to specific principles of screen exposition. In this respect, the scenario gives only a schematic skeleton...The schema must be worked up in detail into its concrete formulation for the screen... (Kazansky, 1927: 120-121).

Kazansky’s fellow Russian Formalist, Eichenbaum, termed this basic segment, constituted in terms of the principles of screen exposition, the “film phrase”(Eichenbaum, 1927: 71-72). In attempting to identify and classify the film phrase, Eichenbaum posed the question:

Is it possible at this time to identify any types of film phrases? Of course such a project would entail a much more detailed investigation, carried out through a shot-by-shot analysis (Eichenbaum, 1927: 73).

Neither Eichenbaum nor his fellow contributors to *Poetika Kino* supplied the solution by offering a typology of the film phrase. As was noted in Chapter 3, Christian Metz attempted to classify segments of film in the *Grande Syntagmatique*. Metz identified four narrative syntagma: the “alternate narrative syntagma”, and the linear narrative syntagma including “the scene” and the “episodic” and “ordinary sequence”, as

specifically having narrative functionality. However he did not specify what this functionality is in terms of the dramatic causality central to theories of narrative. Rather Metz's concern was to identify narrative function in terms of the organization of time and space in the linear domain, a concept that is considered below in the context of the articulation of the dramatic and formal structure of new media narrative.

4.7 Manovich and the "linking" of Narrative

In his discussion of narrative as a database search engine, Manovich draws upon Metz's Structuralist theories regarding the articulation of narrative as language. It was noted above Manovich's contention that narrative is a means of data access (Manovich, 2001: 225-228) provides a sound means of thinking about narrative in new media. This being said it is obvious Manovich's hypothesis is as yet equivocal. Despite his promotion of database as a new narrative form, Manovich somewhat paradoxically sees database and narrative as "natural enemies". He contends that they are "Competing for the same territory of human culture, each claims exclusive rights to make meaning out of the world" (Manovich, 2001: 225). On the one hand Manovich considers the database to be a cultural form which "represents the world as a list of items, and it refuses to order this list" (Manovich, 2001: 225). On the other he considers that "a narrative creates a cause-and-effect trajectory of seemingly unordered items (events)" (Manovich, 2001: 225).

Manovich also states:

This formulation places the opposition between database and narrative in a new light, thus redefining our concept of narrative. The "user" of a narrative is traversing a database, following "links" between its records as established by the database's creator (Manovich, 2001: 227).

It appears that the dilemma for Manovich is the fact that narrative has a causal structure whereas the database does not, yet his own research is centred on creating database narrative. Moreover Manovich notes the importance of the creation of "links" in a database narrative yet, as is evident in his own work, these links are inadequately formulated mainly due to a lack of the application of narrative and cinematic theory.

Manovich appears to confirm a Formalist approach as his own theoretical basis for considering narrative, citing the literary theorist Mieke Bal's definition which postulates the existence of three "levels" in a narrative – text, story and fabula - all linked in causal terms (Manovich, 2001: 228). However as noted in Chapter Three, Manovich fails to provide an adequate functional definition of narrative in new media and fails to address the elements of narrative that Bal addresses in his own research. Manovich does note, "in the world of new media, the word narrative is often used as an all-inclusive term, to cover up the fact that we have not yet developed a language to describe these strange new objects" (Manovich, 2001: 228). In *The Language of New Media*, Manovich asserts as previously noted that "regardless of whether new media objects present themselves as linear narratives, interactive narratives, databases, or something else, underneath they are all databases (Manovich, 2001: 228). As has also been noted, elsewhere in *The Language of New Media*, Manovich argues for cinema as the foremost database form and lauds the work of Dziga Vertov and Peter Greenaway as excellent examples of database narrative. In contradiction in his focussed discussion of "Database and Narrative" in *The Language of New Media*, Manovich asserts that "It is not surprising, then, that databases occupy a significant, if not the largest, territory of the new media landscape. What is more surprising is why the other end of the spectrum – narratives – still exist in new media" (Manovich, 2001: 228).

What is important in Manovich's deliberations is what is missing from the equation – how to make a narrative by linking the elements of the database – in this case by what Brooks (1999) terms in his *Agent Stories* – the "meta cinematic" knowledge of the computer based search engine.

4.8 The Ordering and Linking of Narrative in *Texas*

Despite what Manovich asserts in *The Language of New Media*, in his practical work on database narrative, *Texas*, Manovich appears to be unconcerned about the complexities of editing in terms of its narrative, spatial and temporal parameters. In *Texas* the dimensional parameter of selection that Manovich uses is "similarity". This includes, for

example, similarity of cinematography or location. The *Texas* search engine software generates the movie screened at any one time by starting with a particular clip and then searching the database for clips which contain, for example, “similar” cinematographic parameters. According to Manovich:

In the case of *Texas* what you see on screen while the movie is playing are multiple sequences generated in a *similar* [emphasis added] manner. Each sequence is the result of a particular search through the *Soft Cinema* database. Each is perhaps equivalent to a “scene” in a normal film, while a series of such searches (“scenes”) becomes equivalent to a traditional film. Film editing is thereby reinterpreted as the search through the database. Consequently it is possible to describe *Texas* as a media object that exists “between narrative and a search engine (Manovich, 2005: 13).

The concept of the search engine as a story editor is important for Manovich. Manovich’s notion of editing as existing between “the narrative and search engine” demonstrates an AI (artificial intelligence) enabled act of real time montage compiled “on the fly”. What is in fact new is that the selection and choice is the result of editing chosen and performed by a machine in real time. This phenomenon addresses a number of significant developments in computer enabled new media narrative, the most noteworthy and not inconsiderable actualisation of AI enabled editing via the search engine and coded database. But the second observation one must make about Manovich’s concept of editing as search engine in the genre of database narrative, is to pose the question “To what extent is the new media object thus generated a narrative?” By Manovich’s own admission the poetics of editing of *Texas* “follows the same poetics of record retrieval, i.e. weak connections between the displayed records and abrupt shifts from one record to the next” (Manovich, 2005: 12). Additionally he notes that the clips are always connected via one of the dimensions noted in the descriptors in the table of codification parameters (See Table 3.1). For example, cinematography is noted in terms of distance - a “close” or “medium” shot, shot type is noted in terms of location - “city view” or “private interior” (Manovich, 2005: 2). However it is somewhat unclear as to how Manovich conceives of the unique “narrative” version of *Texas* thus generated. He states, “In contrast to a traditional film, there are no dissolves or cross-fades. Instead one screen layout is instantly replaced by another”.

Manovich says of the editing of *Texas* that, in a nutshell, the ‘hard’ aesthetic of a traditional narrative is replaced by the ‘soft’ aesthetic of a database narrative (Manovich, 2005: 12). Here Manovich fails to address the nature of the poetics of editing in *Texas* as an exemplar of database narrative. For Manovich editing in this instance is the result of a simple “weak connection” or “abrupt shift” between two “records” as the result of a “soft” connection. Meaning is gained by a more or less haphazard contiguity of clips. Therefore in the case of *Texas*, the edit connection is not made as a result of any narrative parameter, but a descriptive parameter, which merely describes that particular clip in isolation. However more importantly it is a technical parameter with little relation to the function of the segment in narrative or stylistic terms.

Manovich’s conception of narrative function and the dynamics of editing in the creation of database narrative thus is either underdeveloped or irrelevant. To clarify this dichotomy it is appropriate to consider what Manovich himself says both in the interview included on the *Soft Cinema* (2005) DVD and an interview with Manovich conducted by the author of this thesis in Sydney in 2003. In discussing the tabulation of the parameters of the coding of the narrative segments in his work, Manovich notes that in some instances the software code was instructed to link shots using the parameter of “camera motion” which is demarcated in the clip content descriptors as “pan left” or “pan right”. While this is a technical consideration, it is merely that – a device of cinema but a device without narrative or aesthetic context – it has little connection to the cinematic story.

4.9 The Ordering of Database Narrative - Manovich and Metz

In the *Language of New Media*, despite his practice as exemplified in *Texas*, Manovich does consider the theoretical implications of his research into the linking and ordering of database narrative. His deliberations in this matter are worthy of consideration for two key reasons. Firstly, they present an original if somewhat inappropriate application of Structuralist narrative theory in an attempt to theoretically validate the database form.

Secondly, they represent the very real use that can be made of narrative and cinematic theory in cutting-edge new media research. For example, in his consideration of the ordering of narrative and the opposition between database and narrative, Manovich turns to the concept of paradigm and syntagm as theorized in semiology by de Saussure and Barthes. To assess the definition of these concepts it is noted that in film theory the syntagma is defined as a

combination of units chosen from paradigms to make a signifying whole... Syntagms can be combinations in space (visual ones), or in time (verbal or musical ones). The units can interact with each other and thus change each other's significance in the syntagm, so that each syntagm is potentially unique with its own set of meanings... in a syntagm the meaning of a unit is determined by how it interacts with the others, whereas in a paradigm it is determined by how it is distinguished from the others (O'Sullivan, Hartley et al., 1994: 315).

On the other hand a paradigm is defined as a “set of units from which one may be chosen to combine with units from other paradigms to form a syntagm” (O'Sullivan, Hartley et al., 1994: 216). Basically therefore in terms of a model of new media narrative as a language, the paradigm can be seen as the database of all possible choices and the syntagm can be seen as the choice made, the narrative.

In his theory Manovich inverts the traditionally perceived relationship between paradigm and syntagm. Using Barthes' theory of the relationship between signs, Manovich affirms that the essential characteristic of literary and cinematic narrative is that “the database of choices from which narrative is constructed (the paradigm) is implicit; while the actual narrative (the syntagm) is explicit” (Manovich, 2001: 231). Conversely in new media, Manovich contends, “Database (the paradigm) is given material existence, while narrative (the syntagm) is dematerialised” (Manovich, 2001: 231). In further elucidation of his point he discusses how the database is the centre of the design process in new media (using, for example, the multimedia authoring tools *Macromedia Director* or *Adobe Premiere*):

It typically consists of a combination of original and stock material such as buttons, images, video and audio sequences, 3-D objects, behaviours and so on. Throughout the design process, new elements are added to the database; existing elements are modified. The

narrative is constructed by linking elements of this database in a particular order, that is by designing a trajectory leading from one element to another. On the material level, a narrative is just a set of links; the elements themselves remain stored in the database. Thus the narrative is virtual while the database exists materially (Manovich, 2001: 231).

According to Manovich “paradigm is privileged over syntagm” not only in the design process but also in the interactive process when the user interacts with the typical interface. For Manovich on the level of one individual screen or a menu, the user is presented with an explicit paradigm of choices. On the level of the whole new media object the user is aware that the trajectory he or she is following is one of the paradigm of all the possible trajectories that are defined. Manovich appears to use his observations about paradigm and syntagm in new media in his desire to promote the database as a new cultural form. He asserts that new media confers a literal translation of “interaction” – “equating it with a strictly physical interaction between a user and a computer, at the expense of psychological interaction”(Manovich, 2001: 232). Manovich contends, “Interactive interfaces foreground the paradigmatic dimension and often make explicit paradigmatic sets. Yet they are still organized along the syntagmatic dimension. Although the user is making choices at each new screen, the end result is a linear sequence of screens that she follows. This is the classical syntagmatic experience” (Manovich, 2001: 232). According to Manovich the cognitive processes involved in understanding any cultural text are erroneously equated with an objectively existing structure of interactive links (Manovich, 2001: 232). Here Manovich poses and forecasts the answer to one of the most important questions of his theory:

Why does new media insist on this language-like sequencing? My hypothesis is that they follow the dominant sociological order of the twentieth century – that of cinema... cinema replaced all other modes of narration with a sequential narrative, an assembly line of shots that appear on the screen one at a time (Manovich, 2001: 232).

In this instance Manovich once again refers to the cinematic mode as a powerful means of presenting narrative in a digital environment. Although Manovich’s deliberations on the nature of the selection and linking of narrative neglect to consider the actual parameters of narrative that contribute to engaging storytelling – dramaturgical and

cinematic form and structure - once again they provide an excellent illustration of the importance of attending to narrative and cinematic theory in new media narrative.

Although Manovich cites the importance of cinema as an influence or exemplar of excellent database narrative form, he fails to apply cinematic theory to his own research and practice. The most important observation to be made in terms of the ordering and linking of narrative is Manovich's utilisation of the Structuralist concepts of paradigm and syntagm which at this juncture underlines the relevance of using Structuralist film theory to consider narrative in new media. Once again this observation serves to illustrate that despite Manovich's avowed disregard of Structuralism as a means of understanding and building a language of new media, as a theory it is eminently appropriate. The appropriation of the Structuralist notion of syntagma and paradigm gives the semblance of academic rigour to Manovich's argument and the notion of the paradigmatic dimension of the database, as being available for interaction all at once, is an original and relevant observation to make on Manovich's part. It has far-reaching implications for the concept of narrative space and the formal nature of new media narrative. However in terms of the ordering and linking of narrative as a causal activity, it is irrelevant and somewhat distracting. It neglects to address the question of the linking and contiguity of units of narrative material which may be addressed by narrative and scriptwriting theory and cinematic theories of montage. Although in hypothesising about the "language-like sequencing" of new media Manovich contends that it follows the "sequential narrative of cinema", he does little to reflect upon the concepts and features of the cinematic ordering of narrative (Manovich, 2001: 232).

Rather than addressing the question of the ordering of narrative in new media in terms of montage, Manovich tends to promote it as a quasi-political or sociological phenomenon. Manovich considers that this form of communicating or linking images in "linear chains", or the cinematic "assembly line of shots that appear on the screen one at a time" (Manovich, 2001: 232) is a result of the alignment of "real" culture with the assembly line of industrial society. He considers that this is in contrast to the centuries of spatialized narrative of European visual culture in which all images appeared

simultaneously, for example, in a fresco or painting. While Manovich uses the parallel between the sequential nature of the language of new media and cinema to delve into the shift from what he terms spatialized narrative to time-based narrative, this is nonetheless one of the most important observations that Manovich makes in characterizing the inherent properties of new media narrative. That is, it presents narrative information in linear sequences.

Despite his allusion to the Structuralist concepts of paradigm and syntagm and in particular Metz's structural theories of narrative (Manovich, 2001: 294, 310), Manovich's application of these concepts to new media narrative is somewhat simplistic and too broad ranging to use in the development of a workable framework for narrative in new media. Manovich's inverse conception of the roles of paradigm and syntagm results in a somewhat anarchistic database of narrative material which creates the potential for "interactive" narratives that are meaningless and without structure, causality or focus.

4.10 Building on Manovich

To build on the case study of Manovich's theory and practice and establish the basic causal parameters of the *Poetics of Mosaic Narrative* in the remaining sections of this chapter and in Chapter Five, theories of cinematic editing and dramatic structure are briefly considered as they influence the linking and ordering of the *Digital Narrative Syntagma* in the process of narration or syuzhet construction. In particular the following questions that research for this thesis has identified as important factors in this process serve as a focus:

1. What happens at the *Story Moment* in terms of narrative causality?
2. What happens at the *Story Moment* in terms of the temporal progression of the narrative?
3. What happens at the *Story Moment* in terms of the building of narrative space, location, mise-en-scene?

4. What happens at the *Story Moment* in terms of the stylistic use of the visual techniques of cinema – mise-en-scene, cinematography and montage?
5. What happens at the *Story Moment* in terms of the audience's perception of narrative or fabula construction?

4.11 Film Theory: Finding the Answer

The existence of the story moment comes about as a result of the processes of editing or montage activated via narrative and stylistic paradigms. In both classic narrative and avant-garde form the process of editing is carefully structured and based on a number of factors that have little to do with “similarity” and the somewhat random nature of editing as exhibited in Manovich's *Texas*. In classic Hollywood narrative, continuity editing is the particular form of editing that is designed to “maintain a continuous and clear narrative action. Continuity editing relies upon matching screen direction, position, and temporal relations from shot to shot” (Bordwell, 2001: 429). On the other hand montage, which is a term often used as a synonym for editing, can either refer to two types of shot compilation. It can refer to a montage of shots that are linked in some way to show, for example, the passing of time or the changing of location. It can also refer to the specific approach to editing developed by the Soviet contemporaries of the Russian Formalists, Eisenstein (1942, 1949) and Kuleshov (1974). Montage in the Soviet sense emphasizes the “dynamic, often discontinuous, relationships between shots and the juxtaposition of images to create ideas not present in either shot by itself” (Bordwell, 2001: 432). Today, for example, audiences are familiar with montage as the style of music television or as a more avant-garde or surrealistic means of linking segments of film, whether it be in traditional Hollywood or art house cinema.

The linking of segments of narrative in classic narrative cinema via continuity editing constructs a spatially and temporally coherent narrative, space and time are portrayed logically at the edit point to achieve the reality effect, whereas in avant-garde cinema time, space and causality may be constructed via different systems. In classic Hollywood cinema time is “implicitly chronological and is seen to run contiguously with space”

(Hayward, 2000: 343). In classical narrative terms therefore the filmmaker's considerations at the edit point or Story Moment include choices about time – whether to join in real time or use ellipsis to condense time, whether to use flashback or flash-forward or whether to use techniques that can either extend or condense time (including cross-cutting or parallel editing). They also include considerations about space – in narrative terms the location of the action. The way that space is revealed within and between shots is also dependent on factors such as shot size or depth or field. These may range from the extreme close-up to the extreme long shot, or they may use Bazin's concept of "deep focus" where elements are revealed in depth such as in Orson Welles' *Citizen Kane*. In avant-garde cinema the notion of chronological narrative and temporal and spatial continuity may be disrupted through, for example, the use of flashback and flash-forward in a film such as *Hiroshima Mon Amour* (1959). It may also be disrupted by jump cuts, unmatched shots, sound, music and graphical elements such as the insertion of text in a film like Godard's *Alphaville* (1965) or the distortion of the mise-en-scene in a German Expressionist film like *The Cabinet of Dr Caligari* (1919). At this juncture it is noted that the concepts of time and space have been theorized extensively in cinematic theory, for example, in Bordwell (1985: 39-57). For the purposes of this thesis the conception of the construction of time and space is conceived in terms of Eichenbaum's assertion that time and space are part of the means by which an audience experiences narrative, that is "the fact that the motion of space and time on the screen must be constructed, because the viewer must be able to sense it. Spatial and temporal relationships in the cinema play the role of fundamental semantic links, without which the viewer cannot orient himself to the flow of the shots" (Eichenbaum, 1927: 73 -74).

In both classic Hollywood cinema and avant-garde cinema the technique of montage has traditionally referred to a more "artistic" treatment of the "join". However montage can also refer to "montage" within the shot, particularly in terms of the Eisenstein's theories of montage. In Soviet Montage the artistic dimensions that the filmmaker may consider include the graphic, rhythmic and spatial relations between the two shots that are joined or relations within a single shot. In recent years avant-garde cinema has influenced both narrative and stylistic techniques in mainstream Hollywood cinema to the extent that

there is less of a division between the two “types” of editing. A case in point is the academy award winning *American Beauty* (1999) with its complex interweaving narrative, symbolism and artistically realised mise-en-scene.

As can be seen from this brief overview, the processes of editing and montage evidence a complexity of decisions about the dramatic and stylistic implications linking two segments of narrative that are crucially undervalued by using a simplistic parameter such as Manovich’s “similarity” to effect an edit decision. In this chapter the above overview of the techniques and rationale of editing as the major device in linking classic Hollywood style narrative serves as a practical tool for the discussion of Manovich’s deliberations and practice in this area. In the next chapter Soviet and avant-garde theories of montage are discussed as a practical tool for the discussion of narrative that is linked via more stylistic, graphical or metaphorical means, what Bordwell terms “art cinema narration” with “its ambiguous interplay of subjectivity and objectivity” (Bordwell, 1986: 20). This is not to imply that one style is more appropriate than the other; merely that both are a means of categorizing the complexity of the linking of the narrative segment in the systematic manner required to develop a metalanguage of narrative for the purpose of software coding.

4.12 The Linking of Narrative – The Creation of Time and Space

Film theory provides a means of thinking about the linking of segments of narrative plot in terms of time and space. Eichenbaum noted the importance of considering the role of spatial and temporal continuity and semantic meaning as the basis for the enunciation of these elements (Eichenbaum, 1927: 73 -74). Eichenbaum conceptualises these elements of cinematic language in terms of their “linkage” and the way they create the basics of cinematic story – the creation of meaning and time and place. Eichenbaum was most concerned with montage in terms of its plot development and as noted above, coined the term the “film phrase” which he saw as “the basic unit” in the segmentation of film (Eichenbaum, 1927: 71-72). He also coined the term the “film sentence” or the “film

period” as the semantic unit formed by the consolidating of units of “film phrases” (Eichenbaum, 1927: 73-74). In discussing these concepts, Eichenbaum states:

From film phrases themselves, let us move on to the question of the linkage of phrases, i.e. to construction of the film sentence or film period. Once begun the alternation of shots demands semantic linkage according to the principles of spatial and temporal continuity. We are speaking, of course of the illusion of continuity, i.e. of the fact that the motion of space and time on the screen must be constructed, because the viewer must be able to sense it. Spatial and temporal relationships in the cinema play the role of fundamental semantic links, without which the viewer cannot orient himself to the flow of the shots (Eichenbaum, 1927: 73 -74).

Eichenbaum’s observations necessitate a consideration of the relations between segments in a narrative progression in terms of their contiguity and syntagmatic relations, which as noted above are best evaluated in terms of Metz’s (1974) *Grande Syntagmatique*. Rather than the conception of syntagm and paradigm that Manovich proposes in *The Language of New Media*, Metz’s *Grande Syntagmatique* provides a way of thinking about how to organize the alternation of shots according to the principles of spatial and temporal continuity. While Metz acknowledges that the existence of a single shot – perhaps Eichenbaum’s “film phrase” - which can convey several informational elements (Metz, 1974: 107), he also notes that the shot is also “the result of an ordering of several elements (for example, the different visual elements in the image – what is sometimes called *interior montage* [sic])” (Metz, 1974: 116). Therefore the shot for Metz is not like a word but like a statement, which is more complex as it may contain several features and convey several informational elements. The syntagma refers to “autonomous segments composed of several shots” (Metz, 1974: 125). Metz’s simple autonomous shots and three types of “illustrative” syntagma: the “parallel”, the “bracket” and the “descriptive”, are non-narrative in the sense that they do not progress the action of the narrative. They may essentially be used to code any of Manovich’s more ambiguous architectural shots or segments in *Texas* where there are no characters involved. Metz’s narrative syntagma – the “alternating syntagma”, the “linear narrative syntagma”, the “scene” and the “episodic” and “ordinary” sequence specifically refer to narrative functionality. In the first instance these syntagmatic classifications provide a useful tool for conceptualising

the creation of time and space via editing. For example, as Monaco notes, the alternating syntagma refers to what is typically offered, “parallel or alternating elements” (Monaco, 1981: 188). This “linking” of syntagmas therefore refers to a type of “cross-cutting” and has a narrative functionality. In Metz’s terms it consists of more than one shot, is chronological, consecutive, non linear and involves spatial separation. An example of the alternating syntagma is the cross cutting in a “chase” sequence, for example, between cowboys and Indians in a western or “cops and robbers” in a crime movie. But despite the usefulness of Metz’s *Grande Syntagmatique* the narrative functionality that it describes is essentially “static” - it does not provide a means of considering the dramatic impact of what happens at the *Story Moment*.

4.13 Creating the Interactive Link: Cinematurgy and the Cinematic Digital Syntagma

In their focus on montage as the creative link in cinema the Russian Formalists were concerned with the building of film in terms of its visual as well as dramatic elements and the effects this has on the audience. Even though Eichenbaum reflected on the linking of units of film in spatial and temporal terms, he added a cognitive dimension to his deliberations. (Eichenbaum, 1927: 62). Piotrovsky also reflected on the linking of segments of film in spatial and temporal terms but added the matter of association (Piotrovsky, 1927: 145). Of the Russian Formalists it is Kazansky who reflects on the dramatic nature of the linkage of the cinematic segment encompassed in, as noted above, the concept of “cinematurgy”. Kazansky pointed out that:

Since montage – the construction of a screen, shadow drama - is by its nature a specialized genre of the art of “dramatic” graphics or “graphic” drama, it would be very fruitful for establishing the basic principles of this unique dramaturgy of the screen (which might be termed “cinematurgy”) to study the devices of sequential graphic presentation of the plot in illustration and in serial “narrative” graphics in general...Cinematurgy, whose aim is the creation of a shadow screen drama, while remaining true to its graphic principles and the illustrational laws of its compositional media, must still work out on this basis its own devices for development of plot on screen” (Kazansky, 1927, 122-126).

For Kazansky the term “cinematurgy” – “the unique dramaturgy of the screen” – encompasses the visual nature of cinema – the “graphic drama” as well as the dramatic nature the “development of the plot”. In his discussions on montage as a means of creating this unique dramaturgy, like his co-essayists in *Poetika Kino*, Kazansky is almost reverent in his advocacy. For him “it is the alpha and the omega, the basis and the crowning achievement, of cinema creativity: montage is the dramaturgy of film in its concrete, screen composition as a whole and in the construction of the individual shots” (Kazansky, 1927: 121).

By building on Kazansky’s idea that cinematurgy is the driving force underlying both the development of the dramaturgical and cinematic nature of a film, the original new media concept, that of *cinematurgy* is proposed in this thesis. This concept encompasses both the “dramatic” and “cinematic” properties of the cinematic new media segment, a concept that is addressed and theorized in the remaining sections of this chapter. The dramatic component of the *Cinematic Digital Syntagma* is defined in terms of its “dramaturgy”. The cinematic component is defined in terms of the “cinematic”. Together these elements combine to create the concept of “cinematurgy”.

As a means of creating the cinematurgy of a cinematic new media narrative, the basic unit of cinematic narrative in new media, the *Cinematic Digital Syntagma* is also proposed as a further refinement of the concept of the *Digital Narrative Syntagma*. The *Digital Narrative Syntagma* identified the syntagma in terms of narrative function, or as an answer to “What comes next?” The *Cinematic Narrative Syntagma*, encoded with the concept of cinematurgy which encompasses both the dramaturgical and cinematic functioning of the new media narrative segment, provides an answer to the “Why?” and the “How?” of “What comes next?” The *Cinematic Digital Syntagma* is therefore a development of the *Digital Narrative Syntagma* which merely notes a narrative function using the Proppian model and a spatial role and temporal role using Metz’s *Grande Syntagmatique*. The elements of the *Digital Narrative Syntagma* did not include the notion of dramatic causality and the artistic treatment of plot whereby the plot may be arranged by means other than a simple linear narrative progression. The coding of the

Cinematic Digital Syntagma will set up the potential for new media narratives to be linked and combined in both dramatic and cinematic terms.

In the remaining sections of this chapter the “dramaturgical” aspects of the concept of *cinematurgy* are considered. The creation of drama is developed in terms of the Aristotelian dramatic three-act structure and the creation of complex narrative structures is developed in terms of Aronson’s Parallel Narrative Theory (2000a). In the next chapter, Chapter 5, the “cinematic” aspects of cinematurgy as relevant to Soviet Montage and avant-garde film theory are considered. These observations are then collated by considering the implications for the linking of narrative at the Story Moment in terms of the inclusive parameter of *cinematurgy*.

4.14 The Causal Connection - Dramaturgy, Causality and film theory

To understand the “dramaturgical” aspect of *cinematurgy*, it is helpful to return to Aristotle’s *Poetics*, which sees action as an emotional orchestration of cause and effect. In order to think about the organization of the elements of the plot in a lineal manner, it is recalled from Chapter Two that Aristotle asserts that a narrative consists of a “beginning, middle and end” (*Poetics*, Section 1, Part VII: 6) and that a plot is not a selection of chance events but is related via “cause and effect” (*Poetics*, Section 1: Part IX: 8). In effect causality may be conceptualised as the narrative “glue”. On the one hand it enables the new media designer to set up the “link” for the various elements of cinematic narrative. On the other hand it enables the audience to understand how these elements “fit” together in new media narrative.

In traditional literary, cinematic and screenwriting theory, since Aristotle it has been argued that events in narratives are causally linked - that changes in the narrative are as a result of cause and effect (Todorov, 1971; Heath, 1981; Neale, 1980; Bordwell, Staiger & Thompson, 1985; Field, 1994; McKee, 1999; Seger, 1994; Aronson, 2000). The oft cited example of what constitutes is taken from Henry James’ *The Art of the Novel* where he notes that The King dies and the Queen dies is not a plot but when

causality is added - “The King dies and then the Queen dies of grief” is a “plot” because it adds causation (James, c1934; Bordwell, 1997: 90).

In theories regarding the structure and function of cinematic narrative, the Formalist film theorist Edward Branigan emphasizes the importance of causality in distilling the essence of what makes any segmentation of narrative work:

If I were forced to use a single word to characterize a narrative organization of data, that word would be "causality." Creating time and place in a narrative is not as important as constructing a possible logic for the events that occur. Or, rather, time and place seem to be a prerequisite for our reasoning about causality and hence exist on a different level of generality than cause and effect (Branigan, 1992: 217).

Of interest is the fact that Branigan also notes that most theories of narratology which take as their starting point a concentration on developing the causal connection of a chain of events or plot are derived from Propp’s analysis of Russian folktales and his identification of thirty-one fixed plot functions (noted above) occurring in the same order and identifiable from different actions across diverse stories (Branigan, 1992: 118).

In the context of the dramatic experience of film, narratological models of story like Propp’s do not overtly encompass the elements of drama in terms of the dramatic visual enactment that is vital to a consideration of film as drama. It must be noted that neither Propp, Porter et al., nor Branigan’s models in isolation take into account the ordering and linking of segments of narrative in terms of the “dramaturgy” of film, that is the dramatic or cathartic effect of the story engendered in the audience and orchestrated by the author as part of the story experience (Aristotle, *Poetics*, Section 2, Part XIV: 10). The narrative functions identified by Propp and Porter which reflect the basic components of the Aristotelian dramatic plot are acknowledged by the dramatic theorists Laos Egri (1946) and Sam Smiley (1971) and the screenwriting theorists Linda Seger (1994), Robert McKee (1998) and Linda Aronson (2000a). For this reason a consideration of “dramaturgy” as discussed in Hollywood scriptwriting theory which specifically focuses on the creation of drama in the visual medium of film is addressed below.

4. 15 Creating the Link - Dramaturgical Structure and Scriptwriting Theory

The poetics of classical Hollywood cinema are fundamentally Aristotelian and are based on the enactment of causality. Dramatic action is precisely plotted in a rising three-act structure to exploit the attributes of causality and the hero's goal directed journey. The audience understands the story when they understand the causal sequence of events. In Aristotelian terms action is character based and comes about as a result of character traits, usually set in action by a fatal character flaw, which is redeemed at the end of the story. An examination of scriptwriting practice reveals that scriptwriters conceive of narrative as a causally related progression of events deliberately constructed to engage an audience. As Bordwell observes "Hollywood screenplay-writing manuals have long insisted on a formula which has been revived in recent structural analysis" (Bordwell, 1986: 19). The scriptwriting theorists Field (1994), McKee (1999), Seger (1994) and Cooper (1997), all envisage film narrative in Aristotle's dramatic terms.

The "classic three-act structure" or "canonical" story contains three acts (Aristotle's beginning, middle and end) punctuated by frequent twists and turns or surprises and reversals. Both the first and the second act end with a dramatic high or turning point and the third act contains the climax and resolution. Aronson (2000a) provides a concise and lucid explanation of the way the author or scriptwriter using the classic three-act narrative structure works to engage an audience in the dramaturgy of film:

Early on in the film there will be an event which changes the normal scheme of things and forces the protagonist in a new direction, effectively starting the story. This is called a *catalyst* or *disturbance*... Once the catalyst/disturbance has occurred, the suspense builds towards the end of the film to create what is sometimes called the rising three-act structure, with the climax being the most suspenseful moment of the film (Aronson, 2000a: 41).

The strategic aspects of the craft of screenwriting that Aronson crystallizes demonstrate the principles of dramatic structure as first postulated by Aristotle and acknowledged in dramatic and cinematic theory as the way to create drama, the way to create suspense so

the audience is emotionally involved in the action and invested in anticipating “what comes next”.

Aronson also offers a unique conceptualisation of how narrative functions relate to the three-act structure which enables a means of integrating the functionally, temporally and spatially coded *Cinematic Digital Syntagma* within the context of a dramatic three-act structure. Aronson cites Sam Smiley’s (1971) *Playwriting: The Structure of Action* as the basis for what she calls “The Smiley/Thompson nine point plan and three-act model” detailed below.

Act One		
1. Normality		
2. Protagonist	=	The set-up
3. Catalyst or Disturbance		
4. Plan	=	Actions in response to disturbance
5. Surprise	=	First-act turning point
6. Obstacle		
Acts Two and Three		
7. Complications, sub stories, more surprises, obstacles	=	Act two, act three up to climax
8. Climax	=	Climax
9. Resolution	=	How the world goes on

Table 4.1: Smiley/Thompson nine point plan and three-act model (Aronson, 2000a: 47)

The Smiley/Thompson plan conceptualises structurally based narrative functions in dramatic terms so that the actual segment of narrative function fits into the overall dramatic arc of the story. In effect function is linked with result in terms of the causal progression of the narrative. For example, if there is a catalyst for action (which is usually found in the first act) the audience knows that the protagonist will plan a response but will usually be surprised at the end of the first act at the turning point, or *Story Moment* identified above.

Aristotelian influenced theories of storytelling whether they pertain to drama (Egri, Smiley, 1971), cinematic theory (Field, 1994; McKee, 1999; Seger, 1994; Aronson, 2000a) or cinema practice (Bordwell, Staiger & Thompson, 1985; Bordwell, 1985, 1986) provide a broad-brush mental construct that is the rising three-act structure, a well-recognized formula for drama in storytelling. However this does not mean that a writer must follow this formula, merely it means that both theory and practice have demonstrated that these elements are essential for the canonical story to work well (Smiley, 1971: 53). If they are not in place stories may appear trite, banal and lack audience appeal. It is evident that this is an element of cinematic narrative design seriously undervalued in Manovich's work and the work of other new media narrative theorists and designers like Brooks (1999) and Mateas (2002).

4.16 Structuring Dramaturgy in Complex Narrative Forms

The research of new media theorists like Brooks (1999), Mateas (2002) and Davenport (1996-2005) has focussed on creating complex and engaging stories in a digital environment. In the previous section the re-contextualization of the concept of "dramaturgy" in a new media environment provided a means of considering the way in which the writer or designer may use dramatic theory to create a story from a database of numerous choices. This is a particularly significant tool if one considers one of the most lauded forms of new media, the interactive narrative which like all narrative forms is created to entice the viewer to interact. Those who create interactive narrative in new media (Heyward, 1997, 2002; Davenport, 2005) also aim to create non-linear narratives. The question for researcher like Brooks, Mateas and Davenport is, "How to structure and link non-linear, multiform or complex narratives so that they may be interacted with in a digital environment?"

Aronson (2000a: 40) demonstrates that the creation of complex narrative structures in cinema is closely based on adherence to the classic three-act dramatic structure and not on random, tenuous or causally irrelevant concepts like Manovich's "similarity". Bordwell also comments on the construction of what he terms "forking path"(Bordwell,

2008: 172) or “network narratives” (Bordwell, 2008: 191) and their reliance on the structural and formal techniques of both classic and art cinema narration discussed in Chapter 5 of this thesis.

In a complex cinematic narrative form plot may be linear or non-linear and highly patterned in terms of its repetitions and parallelisms, or it may be a complex web of cause and effect in which past and future intertwine. Contemporary films like *Pulp Fiction* (1994), *Magnolia* (1999), *The Circle* (2001), *American Beauty* (1999), *Amores Perros* (2000), *21 Grams* (2003) and *Lantana* (2001) employ a myriad of non-linear narration structures and techniques. These include Aronson’s (2000) structural models of Flashback, Parallel, Tandem and Sequential narrative that manipulate the concept of time. Take, for example, the sequential replays of *Run Lola Run* (1999) or the spiralling narrative of *Memento* (2000) noted above. Aronson isolates four major categories of parallel narrative which include:

- Flashback narrative (eg *Shine*, *Citizen Kane*, *Catch 22*, *The Sweet Hereafter*)
- Tandem narrative (eg *Magnolia*, *Short Cuts*, *Crimes and Misdemeanours*)
- Sequential narrative (eg *Pulp Fiction*, *Go*, *The Circle*)
- Multiple protagonist-antagonist narrative (eg the ensemble films: (*The Big Chill*, *American Beauty*, *Tea with Mussolini*, *Rashomon*)

(Aronson, 2000a: 106-107)

As an exemplar of how the new media designer may use Aronson’s theory for the dramaturgy of a new media narrative in the consideration of the implications of dramatic choice at the *Story Moment*, Aronson’s discussion of the structuring of, for example, Flashback Narrative is worthy of consideration. According to Aronson, Flashback Narrative structure uses a series of flashbacks or flash-forwards to construct an entire story in the past that runs in tandem with and impacts upon a story in the present (Aronson, 2000a: 107). Aronson notes that films that successfully use the flashback narrative structure are “meticulous in the placing and content of flashbacks. Placing and content are carefully linked to the demands of the three-act structure in both types of story” rather than films that insert flashbacks at random points or wherever the script appears to be flagging (Aronson, 2000a: 129). According to Aronson:

Flashbacks typically occur at crucial dramatic moments of the story in the present, and depict crucial dramatic moments of the story in the past. In other words, good flashback narrative operates by jumping back and forth between ‘cliff-hangers’ in the past and ‘cliff-hangers’ in the present... Crucially, the cliff-hangers are usually important structural components of the classic three-act structure. They can be the disturbance, the first-act turning point, complications, the second-act turning point or the climax. The first flashback of the film, placed very soon after the triggering crisis, will almost always depict the event in the past that ‘started it all’ – in structural terms, the disturbance. Significantly, this event will be the disturbance in both the relationship line and the action line of the story in the past (2000a: 129).

In terms of the lineal progression of the separate narratives in Flashback Narrative, Aronson notes that most commonly the two stories of flashback narrative unfold chronologically. In the most simplistic versions of flashback narrative “the story in the present is always presented chronologically, with the flashback story pegged to it. When the past has caught up with the present, the flashbacks stop and both stories proceed together, sometimes for an extended final section, sometimes for only a brief conclusion” (Aronson, 2000a: 111). Aronson contends that the opening hook of flashback narrative, what she terms “the triggering crisis”, is the trigger for two stories – it initiates the story in the present and it sets off the flashbacks to the past. The triggering crisis also re-occurs once the flashbacks have depicted the story in the past in full and the past and present have caught up. After this, there are no more flashbacks and the two stories proceed in tandem to the end, usually in the third act of the three-act structure (Aronson, 2000a: 111). Aronson’s theories are relevant to dramaturgy of new media because she successfully shows how the new media designer may combine a number of different pathways of narrative within the one narrative experience in terms of audience response to the traditional rising three-act structure. For the *Poetics of Mosaic Narrative*, Aronson’s theory provides the author with a tool to encode the narrative search engine to enable it to create the complex combinations and interweaving pathways that are afforded narrative in the digital environment.

4. 17 Encoding the Database - Manovich and the “Dramaturgical”

In this final section Manovich’s theory and work are re-visited to consider how the notion of dramaturgy could be applied to the database narrative *Texas*.

In this chapter the codified parameters of the content descriptors of the *Texas* database were proposed using the parameters of time and space from Metz’s *Grande Syntagmatique* and narrative function from Propp’s *Morphology of the Folktale* (1968). The next step in the discussion of *Texas* as a case study of narrative in new media is to apply the dramaturgical facet of *cinematurgy* to enable the narrative search engine to select the appropriately coded narrative segment in order to create dramaturgically structured new media narrative. As has been discussed in this chapter, this involves the application of the dramaturgical component of *cinematurgy* which is based on the classic three-act rising structure and Aronson’s *Theory of Parallel Narrative* for combining multiple storylines within the set-up of the three-act structure.

To apply the concept of *cinematurgy* to Manovich’s *Texas* extra search dimensions may be added to the database referenced at Table 4.1 – *Soft Cinema Content*, to create the element of the *Cinematic Narrative Syntagma*. It is proposed that this syntagma could be codified in terms of the following cinematic narrative parameters:

- a. Temporal and spatial ordering (Metz’s *Grande Syntagmatique*)
- b. Narrative function (Propp’s *Morphology of the Folktale*)
- c. Dramatic segment – kernel or satellite (Porter et al.’s *Scene Function Model*)
- d. Dramatic structure (The Aristotelian Three-Act Model)
- e. Formal structure (Classic Hollywood narrative, Parallel Narrative: flashback sequential narrative, tandem narrative etc)

To apply these parameters to a specific scene or sequence one could select Manovich’s *Texas* database items 32: “Girl at computer” and item 34: “Boy at

computer”. These characters may serve as the narrative protagonists who are to be introduced in parallel during the exposition of Act 1. In terms of the parameters as outlined in points (a) to (e) above Manovich’s *Texas* “Soft Cinema Content” Table could be tabulated as below.

- a. Items 32 and 33 - Alternating syntagma
- b. Item 32 – a Villainy, Item 34 – C Consent to Counteraction
- c. Kernel narrative segment – exposition
- d. Act 1
- e. Flashback narrative

These items - the boy and the girl at their separate computers are the content of the clips of the *Soft Cinema* database have been additionally coded with narrative and dramatic function as part of the following potential narrative.

The dramaturgically coded *Cinematic Digital Syntagma* of *Texas* proposed above would become part of a flashback narrative. The girl and the boy are introduced during the exposition of Act 1 via alternating syntagma. The girl is committing an act of villainy while the boy is causally responding by consenting to counteract.

The above example demonstrates the codified set-up of a narrative segment as an exemplar of the type of dramatically enabled narrative that could be generated if the dramaturgical component of the parameter of *cinematurgy* were to be applied to the elements of the *Texas* database. It is obvious that the clips in the *Texas* database are all single shots and hence according to Metz’s typology in the *Grande Syntagmatique* may be classified as scenes. If a more complex database were to be constructed clips incorporating longer sequences of action - syntagmas could be compiled. However the above exemplar is a simple but appropriate application of the parameters of cinematic narrative as discussed in this chapter.

4.18 Conclusion

In this thesis an examination of the cinematic nature of narrative in new media has identified the lack of systematic research and practice in this area as a major flaw in both new media narrative theory and practice. To address this shortfall the cinematic theory of the Russian Formalists with their focus on the visual nature of cinema as it emerged as an art form almost a century ago has been re-conceptualised and applied to new media narrative. The work of the new media theorist and practitioner, Lev Manovich, particularly his conception of database narrative as a new narrative form and the articulation of new media narrative as a language has been used as a case study for research.

As new media narrative is a visual form hosted via the screen, the cinematic nature of new media narrative has been particularly addressed in Manovich's conception of narrative as database. It is noted that Manovich discusses the structural nature of database narrative as an exemplar of new media narrative form, however it has been identified that the conventions Manovich focuses upon in the *Language of New Media* and *Soft Cinema*, although concerned with cinematic representation, have little to do with the paradigms of cinematic storytelling. These paradigms include, for example, the role of dramatic structure, the realization of time and space and the stylistic and functional role of the techniques of cinematography, mise-en-scene and montage. In this thesis these elements have been theorized in terms of Structuralist literary and scriptwriting theory, and Formalist film theory.

In this chapter the segmentation of narrative and the conception of narrative as a chain of ordered and linked events was discussed. The categorising of the narrative segment in terms of causal, temporal, spatial and stylistic function is a complex and unresolved subject of both historical and contemporary narrative and cinematic theory. It was noted that neither Eichenbaum nor the Russian Formalists attempted to refine the basic unit of cinematic narrative in terms of causal, temporal or spatial function, they merely alerted us to the fact that it existed. It was also noted that the Russian Formalists compatriot,

Vladimir Propp delineated and categorized the functioning of units of narrative, however this was only in one type of text-based narrative, the Russian Wondertale. Porter et al.'s *Scene Function Model* was also discussed as a contemporary model of narrative function. Additionally the French Structuralist Christian Metz's attempt to classify units of film in terms of the spatial and temporal role they played in the narrative unfolding of film in the *Grande Syntagmatique* was examined. The *Digital Narrative Syntagma* coded with the narrative parameters of function, time and space was then proposed as the basic unit of narrative in the new media environment.

However it was noted that narrative is more than a simple chain of events. It is a complex process involving the linkage of the various segments of *Digital Narrative Syntagma*. The existence of the *Story Moment* was identified as a pivotal point for decision-making in the creation of new media at the point of linkage particularly in terms of dramatic progression and causality. While Manovich overtly acknowledges the importance of causality in the articulation of new media narrative as a language it was demonstrated that he fails to address this notion in his own work preferring to link segments from a database in terms of their "similarity".

The *Cinematic Digital Syntagma* was then proposed as a development of the *Digital Narrative Syntagma*. The *Cinematic Digital Syntagma* is coded with the Russian Formalist, Kazansky's notion of *cinematurgy*, which has both "dramaturgical" and "cinematic" properties. The concept of dramaturgical is derived from the Aristotelian notion of dramatic causality. The concept of dramaturgy was applied to the digitally based new media story fragment as a means of addressing the shortfall in the application of the basic narrative element of causality in the representative exemplars of new media narrative discussed in this thesis. In Aristotelian drama causality is engendered in the cathartic experience orchestrated by the classic three-act dramatic structure where each action progresses the narrative as the causal result of another action. The complexity of narrative combinations was discussed in terms of structural nature of the three-act structure which forms the basis for the complex multi-form narrative structures that are

found in cinematic examples of parallel narrative as theorized by Aronson and sought by new media researchers in the creation of interactive non-linear narrative.

The dramatic concepts informing the *Cinematic Digital Syntagma* were then applied to Manovich's database narrative, *Texas*, to demonstrate its potential narrative and dramatic structure, function and form.

In the next chapter, Chapter 5, the cinematic factors influencing the conception of the *Cinematic Digital Syntagma* are examined by considering theories of montage as conceived of by the Russian Formalists and Sergei Eisenstein and as actualised in avant-garde cinema.

CHAPTER 5: NEW MEDIA NARRATIVE AND STORYTELLING VIA THE CINEMATIC MODE

5. Introduction

In this chapter the concept of *cinematurgy* as the motivator for storytelling in the cinematic mode is further developed. The notion of cinematurgy encompasses the dual elements of the “dramaturgical” and the “cinematic”. In the previous chapter the “dramaturgical” and its contribution to a new media narrative was explored in terms of the classic three-act structure and its potential permutations and combinations as realised in a parallel narrative structure. In this chapter the “cinematic” and the implications of the decisions that the new media designer makes at the Story Moment, the point of linkage in building new media narrative is explored. It is proposed that the “cinematic” has two key features activated by montage at the Story Moment. The functioning of montage within and between individual shots or sequences is the “micro” level of cinematic function. The functioning of montage as it contributes to the creation of stylistic systems and to large scale form is the “macro” level of cinematic function. At the micro level montage involves a consideration of the following aspects of the *Cinematic Digital Syntagma*:

- (a) Graphical associations
- (b) Metaphorical associations
- (c) Stylistic associations
- (d) Continuity
- (e) Time and Space

At the macro level montage involves a consideration of the following aspects of the *Cinematic Digital Syntagma*:

- (a) Plot and dramaturgical structure
- (b) Avant-garde structures
- (c) Style
- (d) Form

In this chapter a poetics of the “cinematic” is constructed by focussing on a Formalist and Structuralist discussion of montage in the new media environment. Cinematic montage as theorised, albeit briefly by the Russian Formalists, is considered. Soviet Montage as theorised and practised by the Formalists’ contemporary, Sergei Eisenstein, is examined. Database montage as theorised by Manovich in *The Language of New Media* is scrutinized. Formalist theories of montage are contrasted with Manovich’s theory of montage in new media - in particular as he references the theories of Eisenstein. In addition David Bordwell’s Neo-Formalist film theory is considered as a means of creating systems of style via montage to develop the avant-garde narrative form alluded to by the Russian Formalists in *Poetika Kino* and Manovich and Kratky in *Soft Cinema* (2005).

In this thesis the “cinematic” is conceived of as the defining element of the art of new media storytelling. The term “cinematic” is not unknown in the new media environment. In games design the term refers either to the “look” of the intricately rendered or filmic quality mise-en-scene of a game like *Myst* or to the more “realistic” film or video “insert” segments in an animated game. These “cut” scenes give the player “relief” from the repetitious nature of the computer generated graphics and the skills based involvement of the computer game (Morrison, 2002: Unpublished conference paper). However the proposed concept of the “cinematic” is much more complex than this.

In this chapter the discussion of the cinematic in new media narrative is grounded in terms of Manovich’s new media narrative *Mission to Earth* (2003-2004), part of the *Soft Cinema* project, as well as his references to montage, style and avant-garde form in *The Language of New Media*. It is significant to note that Manovich’s deliberations regarding the place of montage in new media as presented in *The Language of New Media* are as ambivalent as they are for narrative in new media. On one hand Manovich notes the importance of montage in the creation of the interface of the new media object, what he terms the “cut and paste” aesthetic of composition (Manovich, 2001: 130). On the other

hand he discusses what he terms the “anti-montage tendency” of new media in the creation of a form of montage he terms “spatial montage” (Manovich, 2001: 143).

A poetics of montage based on the explorations of the cinematic and its relevance to cinematic new media narrative is tabulated at the conclusion to this chapter. The essential tenet of this poetics is based on the complementary nature of form and structure. As has been noted throughout this thesis, form is determined by structure while structure and the functioning of structure determines form. In the cinematic environment, and it is proposed in the cinematic digital environment, structure is enacted to function via the art of montage. For without a considered treatment of montage, the ordering and linking of segments of film may result in random, meaningless and ineffectual chains of narrative material. The principle element of the “cinematic” therefore is that of montage as in the process of linking one segment or element to the next, montage activates both narrative function and the elements of cinematic style and form. As a means of contributing to the creation of new media narrative, the cinematic may be analysed in terms of the three elements of montage, style and form discussed below.

5.1 The Cinematic Mode of Storytelling

5.1.i Montage as an element of the Cinematic

The first element of the “cinematic”, montage, as noted by the classic film theorist Rudolph Arnheim, was first investigated thoroughly by the Russian film theorists of the 1920s (Arnheim, 1958: 78). Arnheim examines why montage can be regarded as one of the most important aspects of filmmaking and why the Soviet Montage theorists like Kuleshov, Pudovkin and Eisenstein, as well as the Russian Formalists, found it to be “the royal road to film art”:

The single image, after all, arises from a recording process, which is controlled by man but which, regarded superficially, does no more than reproduce nature. But when it comes to montage man takes a hand in the process – time is broken up, things that are disconnected in time and space are joined together. This looks much more like a tangibly creative and formative process (Arnheim, 1958: 79).

In Russian Formalist cinematic theory and practice this “tangibly creative and formative process” - the art of editing and montage – is also recognised as one of the key aspects of film creation. As was noted in Chapter Two, Kazansky contends that montage is the most important aspect of film creation as it is through the montage connection of various segments of narrative information via the plot that the story is realised. Kazansky thus emphasizes the fact that montage is the art of selection and combination. However he also noted that as for the art of mosaic, the choices involved in the art of the selection and combination of shots is also one that relies on the mise-en-scene of each shot (Kazansky, 1927: 120-121). (This is contrast to, for example, the Structuralist approach of the *Grande Syntagmatique* where Metz was concerned with the ordering of the syntagmas of film in terms of their spatial and temporal place in narrative rather than any attempt to address the relationships between the various segments in terms of their mise-en-scene).

The proposal for the “cinematic” in this thesis therefore also focuses on the shot to shot linking that can be best understood by considering Eisenstein’s (1929-1946) theories of montage. Rather than seeing montage as the support of narrative, Eisenstein saw the aim of montage as the creation of new ideas based on collision rather than linkage. A consideration of his ideas is therefore extremely fruitful if one is to consider the means of creating a film via cinematic as well as, or in the place of, dramaturgical means and as a means of thinking about more avant-garde new media narratives like Manovich’s *Mission to Earth*. Eisenstein’s theory of montage, firstly in terms of practical aesthetics at the micro-level and secondly as systems of stylistic and intellectual montage at the macro-level of form is investigated. In concluding, an analysis of Eisenstein’s famous graphics for the “Battle on the Ice” sequence of *Alexander Nevsky* (1938) is proposed as a sequence that conjures in its montage, a total narrative and stylistic experience which graphically represents the proposed notion of the “cinematic”. In essence it is the pinnacle of “cinematic” art described in terms of the practitioner’s own film theory. Interestingly it is very similar in appearance to the graphical interface of new media narrative software programs such as *Macromedia Director*.

5.1.ii Style as an element of the Cinematic

In the consideration of the second element of the cinematic – style - it is recalled that Bordwell defines style as the development of “specific techniques in patterned ways” such that a film is presented with a “unified, developed, and significant use of particular technical choices”. These technical choices include mise-en-scene, cinematography and editing (Bordwell, 1986: 118). It is also recalled that Bordwell contends that a film’s style interacts with a film’s formal system which both supports and enhances narrative and non-narrative form (Bordwell, 1986: 118). Additionally it was noted that the Russian Formalist Tynjanov contended, “In resolving the problem of story (fabula) and plot (syuzhet) it is always necessary to pay attention to the specific material and style of the art form” (Tynjanov, 1927: 95).

5.1. iii Form as an element of the Cinematic

The third element of the “cinematic” encompasses a notion of narrative form that in film theory has been regarded as that of avant-garde, experimental or art film. This is an idea that is built on the concept of association by for example, metaphor or graphics, as the linking device activated at the Story Moment. This element of the cinematic is instrumental in the building of narrative systems other than the classic three-act rising structure as a means of design for the intention of engaging an audience. It is a much more visceral approach to the realization of film form as it often deliberately appeals to the senses, emotions or memories via metaphor or association rather than the logic of the three act structure.

Avant-garde narrative form relies on the functioning of montage at both the micro and macro level. At the micro level, montage involves the actual linking of two segments, and at the macro level, montage involves the way these segments are linked according to the part they play in the overall form and its narrative, stylistic or conceptual operations. In this thesis the consideration of montage in these terms embraces the ephemeral notions of the importance of plot and style that the Russian Formalists telescoped in *Poetika Kino*. It also notes the important practical and aesthetic contributions that Eisenstein

made to the theorization of the techniques of montage. Additionally it recognizes Bordwell's discussion of the importance of montage in terms of style and his theorizing regarding the systematic functioning of avant-garde and art film – what may be regarded as a more “artistic” or alternative treatment of plot other than the classic three act or parallel narrative structure.

5.2 The Russian Formalists on Montage as Art

The ideas of the Russian Formalists regarding the artistic treatment of plot as the *syuzhet* serve as an important starting point for the investigation of the importance of montage as an element of the “cinematic”. Although Eisenstein and the other key Soviet montage theorists and filmmakers, Pudovkin and Kuleshov (1974), as noted above, write about and utilize montage techniques and theory in their work, it is the Russian Formalists who first theorised montage in terms of a comprehensive poetics of cinema and particularly in terms of montage and narrative plot development (Stam, 1992: 72).

The Formalists were divided about whether the story could proceed by way of stylistic variations and schemata or by way of the unfolding of story actions – in effect the notion of the *dramaturgical* and the *cinematic*. One approach was to conceive of the *syuzhet* as integrally related to the *fabula* on the level of story actions, while the other was to maintain that the *syuzhet* was largely responsive to and controlled by style, the stylistic features unique to the cinematic medium. This concern can be found in *Poetika Kino* (1927), in particular in the short essay by Shklovsky, “Poetry and Prose in Cinematography” and the essay by Juri Tynjanov, “On the Foundations of Cinema”. As Eagle notes this dichotomy can be traced back to the Formalist's conception of the role of film as art as outlined by Shklovsky (Eagle, 1981: 2-4). As noted above the Formalist's conception of cinema as art was based on Shklovsky's notion of the de-familiarizing role of art. Underlying Shklovsky's original definition of the *fabula* or story was the implication that the story actions were the basic material or pre-existing core structure which comprised the raw material of the narrative work of art. Tynjanov addresses Shklovsky's distinction between story and plot in terms of style in his discussion of the

foundations of cinema. Tynjanov notes that “two approaches were advocated by Victor Shklovsky, the creator of the new theory of plot: (1) plot as development and (2) the relationship between devices of plot construction and style”(Tynjanov, 1927: 95).

The central issue surrounding this concern between the relation of the fabula and syuzhet is style – the all-encompassing notion of the syuzhet as the artistic organization of story into plot. While Eichenbaum considered that narrative was ultimately grounded in the narrative syntax of events and actions, and progressed via syntagmatic linkages, rendered through montage (as a form of style) he also saw this as the central dilemma of cinema:

From this general characteristic of the film period it follows that the basic stylistic problem of its montage is motivation of the transitions from one film phrase to another. Plot motivation alone does not resolve this problem, since it bears no relationship to the question of the tempo of montage, or to the construction of spatio-temporal relationships... But here the problem of motivation arises. At what point to interrupt one line, and how to make the transition to another? In other words, with what logical relationships to bind the parallels or the pieces of the film period so that the necessity for transitions becomes governed by a stylistic consistency?...The devices for associating the individual parts of the film period – this is the fundamental stylistic problem of montage (Eichenbaum, 1927: 75-76).

Like his co essayists in *Poetika Kino*, in particular Kazansky who typifies montage as the “compositional, nature of film, plot oriented through and through” making it difficult for “the construction of a special stylistics of cinema” (Kazansky, 1927: 126), Eichenbaum noted that stylistic consistency is the “fundamental stylistic problem of montage”.

On the other hand Yuri Tynjanov conceived of a more avant-garde view of the function of montage. He contended that the audience constructs the fabula as they decode the story by relying on the cues of the stylistic embroidering of the action (Tynjanov, 1927: 97). In “Foundations of Cinema”, his contribution to *Poetika Kino*, Tynjanov considered that the stylistic relationship between shots and style could be “the principle mover of plot” by serving as the fundamental principle of linkage (Tynjanov, 1927: 97). Tynjanov compared montage to prose. He hypothesised that editing, rather than grouping shots, forces them into a system of rhythmic sets that are read like verse which he attributed to the “jumping nature” of cinema (Tynjanov, 1927: 94). Tynjanov

attempts to refine a more artistic conception of style as the organising factor of film. Tynjanov discusses in particular films where the story is “enigmatic” and is not “given” in the classic narrative sense. Tynjanov asserted, “The plot development is given over into the articulation and linkage of segments of verbal material outside the story. Story is not ‘given’ and in its place there springs ‘the search for a story’ as the audience “distinguishes and joins the separate parts, which are linked together only stylistically” (Tynjanov, 1927: 97) (Emphasis Tynjanov’s own). This idea lead Tynjanov to consider the most advanced works of cinema as those that were “poetic”- in essence avant-garde – those with the maximum of stylistic dominance or syuzhet patterning.

As noted above the Russian Formalists did not develop their ideas about plot as a stylistic device (Tynjanov, 1927: 100). Tynjanov for example drew attention to aspects of cinema including rhythm, camera angles and lighting and their importance as part or an overall schematic in a film and how these elements progress plot in terms of montage. Tynjanov contended, “Rhythm is the interaction of stylistic moments with metrical moments in the unfolding of the film, in its dynamics. Camera angles and lighting have their significance” but in the final analysis “These should not be random, not ‘good’ or ‘pretty’ in and of themselves – but good in the given instance, in interaction with the metrical flow of the film, with the measure of montage” (Tynjanov, 1927: 94). (These observations about the rhythmic attributes of cinema shall have important implications in Eisenstein’s work and theory regarding his film, *Alexander Nevsky* as discussed below). Overall Tynjanov reasoned “*Further study of plot in cinema depends on investigations of cinematic style and the characteristics of film material*” (Tynjanov, 1927: 99). (Italics Tynjanov’s own).

The Russian Formalists’ division about whether it is plot or style as an element of the syuzhet that comes forward as the principal mover of the story or fabula was not a clear-cut one. This is still the case in both cinematic theory and practice today. In reality most contemporary films rely on the combination of elements of both plot and style as the key to story creation. There are films that are chiefly motivated by plot - in particular classical Hollywood films like *His Girl Friday* (1940). Then there are avant-garde films like

Hiroshima Mon Amour (1959) or *Meshes of the Afternoon* (1943) which build upon systems of style and other means of creating “story” such as the interplay of memory or the cataloguing of images. There are also of course films like *American Beauty* (1999) and *Memento* (2000) which with their complicated interweaving plots and stylistic treatment, straddle the divide between classic narrative cinema and avant-garde or art house cinema. Before considering the status quo regarding plot and style as the motivators of story structure and form in new media narrative, the film *American Beauty* (1999) is examined below as an example of the integration of both plot and style at the service of, and impetus for, narrative in the cinema.

5.3 How is Narrative in Cinema motivated by both Plot and Style?

The Case of *American Beauty* (1999)

As an investigation of complex narrative structure and form, the Academy award winning Hollywood film *American Beauty* (1999) (Best Actor, Best Director, Best Cinematography, Best Picture and Best Original Screenplay (Manguel, 2004: 164) provides an example of the total integration of structure style and form. In its multiform plot *American Beauty* is structurally intricate, dramatically engaging and metaphorically and stylistically complex. The patterning of visual style via montage or the filmic techniques that Tynjanov (1927: 97) identifies as an alternate motivator of film formal structure serve to progress the narrative of *American Beauty* just as much as the parallel narrative plot structure. The systematic use of cinematography and mise-en-scene elements such as composition setting, lighting, colour, costume and props all contribute to the film’s style.

5.3.i Narrative: *American Beauty* opens with the voice-over of the main character, Lester Burnham relating the fact that a year from now he will be dead. While the premise of the film is to find out who murdered Lester, in fact what the film really achieves is to reveal - much like David Lynch’s *Blue Velvet* (1986) - the dark underbelly of the suburban middle class hidden by the perfect white picket fence – as metaphorically developed by the film’s systems of style.

5.3.ii Structure: The plot structure of *American Beauty* demonstrates the characteristics of the ‘multiple protagonist’ parallel narrative (Aronson, 2000a: 221). This structural organization includes the crucial concept of the ‘group action line’ where all the characters are structurally variants of the same type (Aronson, 2000a: 221). Aronson’s structural model posits that the multiple protagonist film is usually a quest, such as *The Magnificent Seven* (1960), or reunion such as *The Big Chill* (1983), or siege such as *Tea With Mussolini* (1999), either real or metaphorical (Aronson, 2000a: 222). In *American Beauty* the three members of the Burnham family are under siege – alienated and trapped in ‘Middle America’ (Aronson, 2000a: 230). In *American Beauty* Lester (Kevin Spacey) is trapped by the mores of suburbia, his wife Carolyn (Annette Benning) is trapped in her role as ‘Super Mom’ and their teenage daughter Jane is trapped by the middle class gender stereotyping of the pursuit of plastic beauty (she is saving her pocket money for a breast enhancement operation) (Aronson, 2000a: 230). Structurally *American Beauty* is an ensemble film and progresses episodically in one long flashback showing the set up to Lester’s murder. However as Aronson seeks to identify in her model, *American Beauty* still progresses retaining the traditional three act structure: orientation, complications and resolution. The traditional three-act structure is enacted for the group as a whole and for each of the key characters who have their own separate action line. In a multiple protagonist structure Aronson suggests that this may be centred on the emotional journey for both the group and each of the key characters, usually triggered by a disturbance impacting upon the ensemble (Aronson, 2000a: 223). In *American Beauty* this occurs when Lester goes through a middle age crisis. Aronson also identifies the role of the outsider who exists outside the group and questions it and has a key role in defining the group by, for example, his or her investigation of the group. In *American Beauty* the outsider is the lover of “beauty”, Ricky Fitts, the Burnham’s next-door neighbour (Aronson, 2000: 226).

5.3.iii Style: The metaphor of the rose dominates the film and is responsible for creating the film’s major stylistic systems. The film is called *American Beauty* - the name of a type of red rose. Metaphorically speaking “all in not roses” in the Burnham neighbourhood. Lester lusts after and dreams of an affair with his daughter’s friend,

Angela. His wife embarks on an affair with a sleazy real estate agent. His daughter becomes involved with Ricky, the unsavoury youth who videotapes her family through the window. Roses are traditionally a symbol of love but in Lester's loveless marriage they represent both his desire for another life and the destruction of him as an individual. For example, in the opening sequence Lester is revealed waking alone in his bed, then sexually relieving himself in the shower. There follows a shot of a perfect red rose and a shot of Carolyn snipping the rose from its stem. Roses also dominate the mise-en-scene of Lester's comfortable middle class home – they surround him in the garden, they are on the kitchen bench and at the dinner table where he is continually castigated by Carolyn and ignored by his daughter. Ironically they also dominate Lester's dreams - his surrealistic fantasies of Angela locate her lying in a bed of rose petals. The name *American Beauty* also can be seen to symbolize the American dream of home, family, job and middle class aspirations. The snipping of the rose is also symbolic of the destruction of the dream as symbolized by the rose. The apparently "perfect" life of the Burnham family is reflected in the high key lighting, the immaculate mise-en-scene of the household, the manicured garden and in Carolyn's coiffure and dress. But the Burnham's family life is hollow to the core. In contrast the outsider, Ricky Fitts' house across the road is more modest, sombre and lit in a low key almost noir style. Frank Fitts, Ricky's father, is a retired army colonel obsessed with guns and military discipline. His catatonic wife Barbara is disturbed, alienated and wears drab clothing. Ricky is also not all he seems. On the surface he is typical high school student with Angela and Jane yet he wears a dark suit and a ski cap and makes money by selling drugs. Ricky's room is a citadel of modern surveillance equipment and contains the library of his perverse voyeurism.

The bright red colour of the *American Beauty* rose is featured in the movie. In the roses in particular but also in the Burnham's perfect house with its white picket fence and bright red door. Lester drives a bright red car and Lester's fantasies feature his daughter's friend, Angela, in a bathtub filled with red roses. The last image seen in the film is Lester's blood splattered on the perfect white kitchen wall.

The entrapment of the Burnhams is also reflected in the cinematography. The Burnhams are surrounded by the white picket fence which frames many of the shots of the house. Lester, Carolyn and Jane are filmed double framed by the screen and the window as they go about their lives – Lester working out and Carolyn obsessing over her perfect rosebushes. Jane entraps Ricky as she undresses in front of her window and the camera she knows he is using to film her from his house. The menace of Lester's impending death is felt in Ricky's illicit filming of the Burnham house which seems to emphasize the role of the audience as voyeur and onlooker to the destruction of the dream.

5.5.iv Form: *American Beauty* is a complex film which evidences elements of both classic and avant-garde narrative form and structure. To regard *American Beauty* as a multiple protagonist parallel narrative, as Aronson does, is to impose a structural model that does not take into account its avant-garde techniques. Aronson's structural model only relates to the organization of the plot in terms of the linear unfolding of narrative. The form of *American Beauty* is created by both the parallel narrative structure, the metaphoric treatment of the red American Beauty rose and the associations of the dream sequences typical of avant-garde narrative structure. In her deconstruction of the plot structure of *American Beauty*, Aronson does not note the fact that what sets the film apart from the classic continuity of mainstream Hollywood cinema is its appropriation and use of the avant-garde. *American Beauty* proceeds episodically and often uses, for example, the jump cut rather than continuity editing. It contains surrealistic dream sequences, mixed genre home video footage and a sustained use of metaphor, for example, the trademark red rose. *American Beauty* demonstrates an intricacy of montage and style, as well as a use of complex plot structure, a scenario not traditionally associated with classical Hollywood cinema that serves to demonstrate an example of a film in which the narrative is progressed by both structure and style.

Whether it is style or the narrative dictates of plot that are the most important motivators of story, for the Russian Formalists and for contemporary new media storytellers, the central dilemma is still one of how to make the link or transition from one shot to the next?

5.4 Manovich on Montage in New Media

In *Poetika Kino* (1927) Tynjanov writes of the features of the artistic technique of montage in the then-emerging art form of cinema, in terms of “old” and “new” cinema:

One of the differences between ‘old’ and ‘new’ cinema lay in the treatment of montage. Whereas in old cinema montage was a way of gluing together, of soldering, a means of explanation of story situations, and a device in and of itself perceptible and hidden – in new cinema it became one of the fundamental perceptible elements, a sensed rhythm (Tynjanov, 1927: 93).

Almost eight decades later Manovich discusses the treatment of montage also drawing parallels between the old and the new. However Manovich’s focus lies more with the mechanical rather than with the stylistic techniques of montage. Manovich writes of montage in two different contexts in *The Language of New Media*. He writes firstly of montage in a structural context as the “cut and paste” of editing (Manovich, 2001: 130), and secondly, of montage in a formal context as the creation of space and the creation of different perspectives (Manovich, 2001: 144). Drawing parallels between new media and old media, in this case the magic lantern show where slides were selected for display by the exhibitor, Manovich sees the authoring and editing of new media objects as a process of selection and addition rather than an integral combination or montage.

Manovich concludes that:

The practice of putting together a media object from already existing commercially distributed media elements existed with old media, but new media technology further standardized it and made it easier to perform. What before involved scissors and glue now involves simply clicking on ‘cut’ and ‘paste’. And, by encoding the operations of selection and combination into the very interfaces of authoring and editing software, new media ‘legitimises’ them (Manovich, 2001: 130).

To develop this idea in full Manovich turns to the concept of compositing in new media which he sees as a technique of simulation and “a counterpart of selection” (Manovich, 2001: 139). For Manovich compositing is the process in which “different spaces are combined into a single seamless virtual space” (Manovich, 2001:144). Manovich points out that the compositing of images follows the selection process but that ultimately due to

the modular nature of new media, elements interact to produce an object in which the separate elements are no longer accessible. For example he cites the operation of the new media software *Adobe Photoshop 5.0*, which collapses elements of the composited image upon the “flatten image” command. He also cites the digitally composed images of Hollywood movies such as *Star Wars* as evidence of digital compositing. It must be noted however that although Manovich proposes that “digital compositing exemplifies a more general operation of computer culture – assembling together a number of elements to create a single seamless object” (Manovich, 2001: 139), this observation is redundant as this operation has been an integral part of the film post production process since the earliest filmmakers, for example, Melies and the Russians, Pudovkin, Kuleshov and Eisenstein.

As is the case in his thinking about narrative and database, Manovich appears to vacillate in his thinking about the relevance of montage to new media objects, citing the anti-montage tendencies in the modern GUI (Graphical User Interface). Although he suggests that “while old media relied on montage, new media substitutes the aesthetics of continuity”. Manovich observes that:

A film cut is replaced by a digital morph or digital composite... the instant changes in time and place characterized by modern narrative, both in literature and cinema, are replaced by the continuous non-interrupted first person narrative of games and VR. Computer multimedia does not use any montage... Instead it follows the principle of simple addition. Elements in different media are placed next to each other without any attempt to establish contrast, complementarity, or dissonance between them (Manovich, 2001: 143).

Ultimately Manovich concludes, “in computer culture, montage is no longer the dominant aesthetic” (Manovich, 2001: 144). Yet somewhat paradoxically he then seeks to establish the importance of montage in the creation of “a single moving image sequence” and discusses in some detail the contribution of Russian montage artists and theorists - Eisenstein in particular - and the French New Wave - Godard in particular - to montage aesthetics (Manovich, 2001: 145).

To further develop his speculation as to why montage has been relegated to such an “insignificant” status in new media, Manovich contrasts the concept of compilation with cinematic montage in the Russian tradition of Eisenstein’s montage of attractions which he proposes “aims to create visual, stylistic, semantic, and emotional dissonance between different elements” (Manovich, 2001:144). In contrast, according to Manovich, the “anti-montage” tendency of new media is focussed on the production of “a seamless whole, a single gestalt” (Manovich, 2001: 144). Whilst considering the conventions of composition, Manovich starts from the premise that film montage is “a time-based montage” (Manovich, 2001: 155) which privileges temporal montage over montage within a shot. Manovich cites Eisenstein’s theories of montage which relate to visual and rhythmic montage as principles that ultimately “coordinate changes in different visual dimensions over time” (Manovich, 2001: 156). He contrasts Eisenstein’s principles concerned with the development of the temporal with compositing which renders the spatial. Manovich then postulates that film theory and cinema must no longer consider the digital moving image as a subset of audio-visual culture but a subset of “audio-visual-spatial” culture (Manovich, 2001:157). According to Manovich, ultimately the alignment of cinematic montage and digital compositing provides a new terrain for cinema. Manovich thus proposes the concepts of stylistic and ontological montage. In essence, for Manovich, ontological montage refers to the “coexistence of incompatible elements within the same time and space” (Manovich, 2001: 159). Stylistic montage refers to the compilation of “stylistically diverse images in different media” (Manovich, 2001: 159). For Manovich this refers to, for example, compilations of live action, documentary and animated footage such as that found in the work of avant-garde media artists including the Czech filmmaker, Konrad Zeman. This type of montage according to Manovich, only came to the fore in the 1990s when computer based digital compositing enabled the combination of different formats, including 35mm and 8mm film, video, and early digital formats (Manovich, 2001: 159).

Manovich’s conception of montage in new media narrative and the interpretation he gives of Eisenstein’s theory of montage deserves closer examination. Manovich rightly conceives of montage as existing in a stylistic and ontological dimension. However rather

than this being a “new” phenomenon of new media, it is in fact an established paradigm of cinematic theory. What Manovich terms “ontological” montage was first theorised by Eisenstein in the 1920s. What Manovich terms “stylistic” montage, was practised by avant-garde artists of the 1920s and the French New Wave of the 1950s and 60s.

Manovich is in error to suggest that this is a “new terrain” for cinema when in effect the techniques of stylistic and ontological montage have proved fruitful, for example, the avant-garde of the 1920s, American avant-garde filmmakers of the 1930s including Maya Deren, the French New Wave of the 1950s and as Manovich himself mentions, the more recent works of video artists such as Zeman.

In the last Chapter of *The Language of New Media*, “What is Cinema?” Manovich continues his discussion of the notion of spatial montage, as a specific feature of what he considers is a new type of cinema, rather than a new type of new media cinematic narrative. Although this section forms a part of *The Language of New Media*, it presents ideas that appear to be an addendum to the rest of the core focus of his theory. In “What is Cinema?” Manovich specifically discusses a new type of film language in the cinematic arena – an inverse of the way cinema has affected the language of new media – in this instance the way that new media has affected cinema. In this context, Manovich considers spatial montage as an alternative to traditional temporal montage. However in doing so, he also makes a number of interesting observations about narrative in the new media arena. But once again many of the issues that Manovich discusses as being “new” have in fact been dealt with in cinema history and theory and have been an integral part of the cinematic canon prior to the arrival of electronic storytelling. In “What is Cinema?” Manovich contends that the focus of film theory from Eisenstein in the 1920s to Deleuze in the 1980s is on the temporal structures of film rather than the spatial. In contrast and once again drawing from the history of art, he discusses how different events can be presented as taking place in one pictorial space – “whether the fictional space of a painting or the physical space that can be taken by the viewer all at once” (Manovich, 2001: 322). Manovich draws this deduction from the frescoes of Giotto where a narrative event is framed separately but can be viewed all at once. Manovich observes that unlike the sequential narrative of cinema, every shot in a spatial narrative is available to the

viewer “at once” (Manovich, 2001: 322-324). Manovich also observes that the cinematic practice of favouring temporal montage over spatial montage (except for a few notable exceptions like Gance’s *Napoleon* [1927] with its multiple screens and the expanded cinema movement of the 1960s) is not the norm in computer culture with its multiple windows of information displayed on one screen (Manovich, 2001: 323). Ultimately he predicts that the tradition of spatial narrative suppressed by twentieth century cinema will re-emerge in the next generation of cinema – “broadband cinema” or “macrocinema” - which will add multiple windows to its language (Manovich, 2001: 324). (It is relevant to note here that Manovich’s notion of cinema as broadband cinema or macrocinema is in fact a *fait accompli* in the cinematic storytelling of interactive television in particular. iTV delivered via broadband in television programs such as *Fat Cow Motel*, which is broadcast via multiple platforms, enables concepts of live, multiple screen, real time interactivity in two-way communication. The web-based *Love Cuts* also enables interaction via multiple windows of story information). Further developing the concept of spatial narrative Manovich turns to a consideration of spatial montage as exemplified in the work of the Russian net artist, Olga Lialina in the web-based *My boyfriend came back from the war!* Here Manovich makes what he considers a number of new and salient points based on observations of this particular work. The content of the narrative of *My boyfriend came back from the war!* “splits” from a single screen into multiple screens as the viewer follows more links. As the narrative progresses or “activates different parts of the screen” (Manovich, 2001: 325), each new image is spatially juxtaposed with all of the other images on the screen, as well as the one that temporally preceded it. Manovich’s conclusions regarding spatial montage in this instance are noted in their entirety as they make many unique and important observations about the characteristics of spatial montage in new media versus cinematic montage.

Montage acquires new spatial dimension. In addition to montage dimensions already explored by cinema (differences in images’ content, composition, and movement), we now have a new dimension—the position of images in space in relation to each other. In addition the images do not replace each other (as in cinema) but remain on the screen throughout the movie...Time becomes spatialized, distributed over the screen. In spatial montage, nothing need be forgotten, nothing is erased...spatial montage can accumulate events and images as it progresses through its narrative. In contrast to the cinema’s screen,

which primarily functions as a record of perception, here the computer screen functions as a record of memory (Manovich, 2001: 325).

According to Manovich, the aesthetics of spatial montage are appropriate to the computer user's experiences of multi-tasking and the multiple windows of the GUI. Manovich then argues that:

The result is a new cinema in which the diachronic dimension is no longer privileged over the synchronic dimension, time is no longer privileged over space, sequence is no longer privileged over simultaneity, montage in time is no longer privileged over montage within a shot (Manovich, 2001: 326).

Although Manovich's observations regarding the nature of spatial montage are appropriate, especially his comment that the narrative is spatialised in physical terms, the moving image remains on the screen for the viewer to observe at all times rather than remember. This brings into consideration other factors not mentioned. How much of the moving image does the viewer look at one time? How much does the viewer retain in their memory? How much do they need to retain to be involved in the cinematic narrative experience? Mike Figgis' *Time Code* (2000), although edited on digital equipment, was released on 35mm film. At all times it projects four windows to the world – four different versions of the story action. In this sense spatial montage is not new and the paradigms of cinematic storytelling still exist between shots and segments of story.

However Manovich does raise a number of issues that bear further consideration in developing the poetics of montage in new media. First, is Manovich's citing of Eisenstein's theories of montage. Second, is his use of cinematic exemplars to verify his hypothesis which may be further developed to reiterate the importance of cinematic theory in a poetics of new media. While it appears that Manovich is attempting to privilege the idea of "macro-cinema" by developing his idea of spatial montage, in effect the arguments he uses merely serve to re-assert the importance of montage as one of elements of the "cinematic". What Manovich fails to address in any detail and what other new media theorists (Murray, 1997; Laurel, 1993; Davenport, 1996, 2004; Mateas, 2001,

2005) also fail to address, is what happens narratively and stylistically when two shots are joined via montage.

Ultimately it appears that Manovich sees montage as a tool to build new forms rather than a new tool to tell stories. This fascination with form at the expense of story and style has in effect diminished the impact of his work. Yet it marks a significant point in the development of new media narrative form and the treatment of narrative space, and makes Manovich's treatment of montage in a spatial dimension rather than a lineal dimension, relevant to montage as creator of structure and form in new media narrative.

5.5 *Mission to Earth* (Manovich, 2003-2004)

Manovich's database narrative, *Mission to Earth* (2003-2004), is worthy of scrutiny as an example of the activation of structure and systems of style via the processes of montage in the new media form of database narrative. In discussing his approach to the creation of *Mission to Earth*, Manovich notes the dilemma he faces in the creation database narrative:

One of the challenges in creating *Soft Cinema* films is to come up with narratives that have a *structural relationship to the database aesthetics* (Manovich, 2004: 20) (Emphasis added).

Essentially this dilemma encapsulates the Russian Formalist concern with the co-existence of narrative structure and the aesthetics of style as the principal “movers” of story.

As an exemplar of database narrative, *Mission to Earth* is inherently more complex than the simplistic *Texas* and marks a development in Manovich's use of the Structuralist and Formalist parameters of new media poetics. This is due to a development of Manovich's (considered or otherwise) use of the techniques of avant-garde narrative and the Formalist use of the aesthetics of montage, mise-en-scene, cinematography and sound. *Mission to Earth*'s story assumes a greater primacy in the storytelling process – it displays a much more powerful *raison d'être* or “thematic” to use Tomashevsky's term (Tomashevsky,

1926: 68). Manovich sees *Mission to Earth* as “an allegory of both the Cold War era and the contemporary immigrant experience” (Manovich, 2004: 20).

- (a) The Narrative: *Mission to Earth*, like *Texas* is a database narrative in which the *Soft Cinema* search engine is programmed to select clips from a database to generate a movie. *Mission to Earth* relates the story of Inga, an alien who has been sent to Earth from Alpha-I, a planet that Earth predates by twenty years in cultural and technological terms. Inga’s mission is to observe the inhabitants of Earth and report back to test the Alpha-1’s “Direct Observation Theory”. It quickly becomes obvious that Inge has been forgotten by her superiors and has languished for twenty years. Her reports remain unacknowledged and her retrieval from Earth appears to be indefinitely postponed. As is the case in *Texas*, Inga’s story is revealed via voice-over, in this case Inga’s own rather than the third person narrator of *Texas*. As is the also the case with *Texas*, it is the voice-over which forms the link between the video clips randomly selected from the database. It is almost as if in the edit process the voice-over forms a layer over which many seemingly unrelated images can be made to cohere.
- (b) Access: In the three separate viewings of *Mission to Earth* accessed for this thesis, much the same story is told. Whether this is true of the original *Soft Cinema* installation is not clear, as Manovich notes that as for *Texas*, the DVD version captures a number of versions of the original digital installation. However it would seem that in the original installation of *Mission to Earth*, Manovich’s intention was to create an infinite number of visual tracks based on the same audio track or first person voice-over narration and accompanying soundtrack of haunting, memory-evoking music. In each of the three viewings conducted for this thesis, the voice-over and the sound track were the same. In each the visual track commenced with the same sequence of scenes – the female narrator recalling her happiness on the planet Alpha-1 as a child, and her favourite things on earth – the first being going through a car wash. This sequence is accompanied

by intriguing womb-like shots of the car wash's rubber cleaning brushes taken from the inside of a car.

The visual narrative of *Mission to Earth* is cleverly construed around the sound track so that in all instances there is an appropriate match of sound and vision. The narrative premise of "Direct Observation Theory" allows Inge to wander basically anywhere and wonder about her life. In line with the idea of her observation of Earth, the vision includes multiple shots featuring Inge travelling on trains, wandering in fields, exploring abandoned buildings and attending to her computer. She appears as if she is in a dream where she recalls her experiences on Earth or composes emails of her observations. These shots aptly align with the voice-over which is a recollection of her memories both on Earth and of her happy childhood on Alpha-1. In a number of instances where the soundtrack is solely composed of music, the vision is constituted by motion graphics, albeit different graphics for two of the three viewings. In the shots where Inge recalls her childhood, shots of different uninhabited landscapes provide a suitable match for the voice-over.

The closing of the narrative concluded with the same sequence of scenes in all three viewings. This sequence entailed Inge wandering along a road in the woods until she reaches what appears to be a space ship which it seems has been sent to finally collect her from Earth. Inge ponders her fate – she muses in voice-over whether to stay or return? She contemplates the ant crawling on her hand in a scene reminiscent of Luis Bunuel's surrealistic *Un Chien Andalou* (1929). She watches the ant as it takes off. The audience is left to wonder what Inge will do.

In the *Soft Cinema* project, Manovich notes that the software is used to "author" sequences of clips by giving, for example, the encoded command to the coded clips. According to Manovich, the only element that is repeated is the voice-over which loops every twenty minutes. In the interview included on the *Soft Cinema* DVD, Manovich provides an example of how his system works:

I want to build (a) sequence of clips that will have camera movement to the left... so using standard procedures from both classical and experimental cinema with the idea that if you edit clips together you edit shots together - they have to share both some content properties but also some formal properties but the new element here is the layout of the screen and also in fact it is a cinema which has been edited on the fly by software (Manovich, 2005, DVD Interview).

In terms of the goal that Manovich has set himself and in terms of extending the functioning of cinematic narrative in a digital environment, Manovich has been eminently successful. The story of *Mission to Earth* is plausible and well rendered. However in terms of whether or not the story addresses the parameters of the cinematic in a storytelling system, it is in its infancy. However this does not mean it cannot be improved.

- (c) Thematic: *Mission to Earth* has an appropriate and cleverly construed thematic that again allows the different elements of the visual narrative to cohere. In her recollections, Inge recalls a boyfriend with whom she was involved on earth. Like her he was an immigrant and an outsider, but he was also an artist. However in the end he preferred to remain an outsider. He was happy attending to his painting and refused to assimilate, so they parted ways. In the final sequence where Inge is recalled to Alpha-1, she recalls the wisdom he displayed in being true to himself. Her purpose on earth has been made virtually meaningless when she is told that her mission has been abandoned because the planetary research consortia have been eliminated. This is conveyed via voice-over in the words of her commander, “The period of Enlightenment ... in the 20th Century has ended with the globalization of materialistic ideals and the flattening of cultural differences between different areas. There is no need for observation...(to) justify research on earth” (Manovich, 2005).
- (d) Structure: *Mission to Earth* runs for approximately twenty minutes and is constructed of clips of two minutes’ duration drawn from a database of 425 clips. This database consists of four hours of video, four hours of voice and five hours

of music. On the screen a number of what Manovich terms “co-present” windows (generally three) display what the character is seeing, thinking and remembering at any one time. Using rules defined by the author (in this case Manovich), the *Soft Cinema* software generates variable screen layouts and selects clips from a database. According to Manovich these clips “are assigned ten different parameters - both semantic and formal” (Manovich, 2005 DVD Interview). The parameters Manovich uses to code the clips for *Mission to Earth* are not noted on the DVD nor on Manovich’s website, as they are in the case of *Texas*. However it would appear that in his interview Manovich is discussing the *Soft Cinema* installation as one entity, so one is lead to believe he has used the same type of parameters to code the database clips for *Mission to Earth*. Therefore these clips are coded in terms of “semantic” variables such as geographical location, the action of the scene, such as “girl at computer”, or the camera attributes of “contrast, average brightness or movement to the left”.

- (e) Montage: In terms of the articulation of database narrative, or in this case the functioning of montage, Manovich notes that the “question is ‘What is (the) connection between what is in [sic] the screen and the story?’” In the *Soft Cinema* DVD interview, Manovich discusses the aim of his software program. (Manovich’s comments below are a direct transcript).

(I) specify I want ...connection so (I) can use it as a traditional editing system. So I can say I want this particular video to appear in this part of the story or I can say for the system to completely randomly select the clips. What I am doing is something in between. Some of the decisions are random but most of the decisions are based upon this kind of meta rules which are set up beforehand and what I am doing is experimenting with different ways to use the system (Manovich, 2005 DVD Interview).

Ultimately Manovich concludes that “What I am doing is as (an) artist - I am trying to figure out how to use the computer to represent our subjectivity in new ways by drawing, for example, on Faulkner, Proust, Joyce’s idea of inner monologue. (I am) interested ultimately in how we are going to represent consciousness in a computer in new way” (Manovich, 2005: DVD Interview). In

the future Manovich aims to make new editions and develop software where “something that happens in the big window triggers something in your mind for example: you meet someone and you have an association - you think about another meeting that is playing in the small window” (Manovich, 2005: DVD Interview).

(g) Screen layout and narrative form: In *Mission to Earth* the motion graphics align with the “story-presenting” windows. In any given playback, a narrative of approximately twenty minutes in length is created. In line with Manovich’s theory of “Macro cinema”, each clip is presented via a screen composed of three windows. One window screens a covering or long shot of the central action, one window screens a close-up of the action and one window screens motion graphics rhythmically supporting the cadences of the narrator and according to Manovich, “visualizing the themes and feelings of the characters” (Manovich, 2005: DVD Interview). The subjective camera appears to glide through each scene giving the impression of the voyeur or the flaneur - ever-searching for something just out of reach.

In *The Language of New Media*, as discussed above, Manovich is interested in the idea of “macro-cinema” – cinema that is presented in a number of “co-present” screens. He notes that a vital new element in *Soft Cinema* is the layout of the screen. Manovich’s cites his influences as being the abstract artist Mondrian and the GUI notion that today one interacts with a screen that is comprised “of multiple windows of different dimensions” (Manovich, 2005: DVD Interview). Manovich contends that in this “enterprise”, the symmetry and graphics are more important than the traditional cinema screen where a single image occupies a single screen. He also notes the influence of the multi-screen format of financial TV and news TV programs which run news on the main screen with information regarding stock and shares running on a small screen. Manovich reveals that it is this “cultural” influence (an example of his digital principle of transformation) of the use of multiple screens of multi media information that he is trying to use in

the techniques of narrative cinema. He says, “Maybe (the) technology of television and (the) graphical user interface of the computer and certain techniques of television in fact represent a new advanced aesthetics - graphs and chart – graphics”. However he also asserts he has learnt “From financial TV that in order for this to work (we) can in fact combine narrative with loops, for example financial TV has financial data looping. In *Soft Cinema* from time to time (the) computer takes words from stories being presented and puts them on the screen...(there is also a nice interplay for flash forward and flashback” (Manovich, 2005 DVD Interview).

5. 6 An Analysis of *Mission to Earth*: Structure, Form, Montage and Style

The above discussion of the concept and operation of the *Soft Cinema* narrative, *Mission to Earth*, demonstrates an innovative and well-realized practical example of what can be achieved with computer generated narrative in new media. In *Mission to Earth* the features and operations of computer based storytelling - where in effect interactivity is enacted by the *Soft Cinema* search engine - are performed via software encoded with parameters designed to tell a story. Using the Formalist and Structuralist methodology of the *Poetics of Mosaic Narrative*, *Mission to Earth* may be analysed as a further exemplar and basis for the tabulation of the cinematic in new media narrative. In structuring *Mission to Earth*, Manovich notes that:

If *Texas* uses semi-random database retrieval to represent ‘info-subjectivity’, then *Mission to Earth* adopts the variable choices and multi-frame layout of the *Soft Cinema* system to present ‘variable identity’. That is the trauma of immigration, the sense of living parallel lives, the feeling of being split between different realities. To this end, in generating every part of the film, the software chooses from among a number of alternate sequences that reflect Inga’s variable identity (Manovich, 2004: 20).

The central concerns of this thesis as regards the analysis of *Mission to Earth*, may be addressed by the following questions: “How does the software “choose” between the alternate sequences”? “How are the dramatic and cinematic parameters of narrative that have been canvassed in this thesis constituted in the *Soft Cinema* system as a working

proto type of computer generated narrative”? “Does *Mission to Earth* ‘work’ as a cinematic narrative in a digital environment”? “If it does - why? If it does not - why not”?

On a superficial level *Mission to Earth* “works” because it uses the voice-over sound track to construct a simple dramatic three-act structure. In Aristotelian terms – in the “beginning” Inge is on Earth, in the “middle” there is a major complication – Inge is left on Earth, in the “end” there is the climax – she is recalled because her mission is meaningless, and there is an ambiguous avant-garde resolution – the audience is uncertain as to whether or not she will take the spaceship back to Alpha-1. Overall *Mission to Earth*’s narrative premise – that of ‘variable identity’ and the straightforward but dramatically infused voice-over narration enables a simple oral story. Although the selection of video clips selected are somewhat random, they “make sense” because of the narrative and cinematic techniques Manovich uses.

In narrative terms the extended metaphor of the search for identity or indeed memory appears to be a convenient “catch-all” or organising focus for new media narrative. The search or journey gives a *raison d’être* to the narrative in line with Joseph Campbell’s (1972) theory of “the hero’s journey” as a well-recognized story type. Additionally as a narrative “shell”, the notion of memory sets up the random and associative nature of thoughts and reminiscences. The premise of memory and identity was also instrumental in ensuring that Megan Heyward’s *I am a Singer* coalesced as a narrative. (In *I am a Singer* the narrative is based on the premise of the singer who has had a car accident and has lost her memory. Through searching through her own archives, letters and newspaper accounts of her life she tries to construct her lost identity). The scenario of the search for identity or the reclaiming of oneself via memory is a sound premise for a narrative - either classic or avant-garde. Nonetheless it would make sense to validate it in terms of the overall structure and functioning of the narrative, rather than use it as a port-manteau device to create coherence in a new media object which otherwise would not function as an organic whole. In the case of *Mission to Earth* the search for identity has been attenuated to the extent that it encompasses the notion of multiple identities – not as a

causal element of the narrative but rather as a means of validating what could be an otherwise incoherent set of clips.

The formal nature of *Mission to Earth* is underdeveloped but it does demonstrate a basic use of avant-garde structure and form which could be understood by the application of, for example, Eisenstein's montage theory considered below. In *Mission to Earth* the linking device is the soundtrack, not the visuals. This is perhaps where an MTV aesthetic with its often loose connection of words, sound and vision driven by the power of the music track is demonstrated, but in storytelling terms there are more appropriate systems that would reward application. These are the systems of the avant-garde narrative form. The parameters of the cinematic as outlined in the previous section tabulated montage as involving the careful consideration of the aspects of cinematography, mise-en-scene and montage. *Mission to Earth* does encapsulate these elements in a haphazard manner. For example the mise-en-scene of each shot is tonally consistent so there is a veneer of similarity between shots. But the application of cinematic montage techniques is significantly underdeveloped. The spatial montage that Manovich advocates in *The Language of New Media* is demonstrated in *Mission to Earth* but it is basic. The shots complement each other, some provide a type of rhythmic punctuation to the action while others provide the window to the dream. But this is nothing new – instead of this happening on a linear plane it is happening on a spatial plane.

What is of most interest in *Mission to Earth* is the role that the “cinematic” plays in making the story successful. The aesthetics and stylistics in terms of mise-en-scene, cinematography, motion graphics and sound which are an important aspect of the “success” of *Mission to Earth* are an exemplar of new media narrative in the avant-garde tradition as discussed below. As a case study for this thesis *Mission to Earth* therefore presents a number of pertinent features which validate the “cinematic” in new media narrative in the following sections of this chapter. At the micro level, *Mission to Earth* evidences a considered use of the aesthetics of cinema in terms of mise-en-scene, cinematography and montage which are important factors in the linking of segments of visual narrative. The use of the multi-screen format and motion graphics which creates a

montage of screens within a scene or sequence as well as a montage between scenes and sequences, is considered below in terms of Eisenstein's theories of rhythmic, metric and tonal montage. At the macro level, Manovich's use of montage to create associations and memory in the avant-garde tradition, demonstrates the need to formalize a theory of avant-garde narrative structures (discussed below in terms of Bordwell's (1985) theory of avant-garde narrative form) to use in the coding of the formal nature of the computer database.

5.7 Eisenstein's Theories of Montage – Montage at the Micro Level

The focus of this thesis is the construction of narrative in the new media environment – which means in effect the contemplation of how to render the story or fabula via the construction of the plot or syuzhet. In Chapter Four this process was discussed in terms of the ordering and linking of narrative via the editing of segments of film according to the paradigms of dramaturgy. In film theory the terms “editing” and “montage” are generally used synonymously. In French film theory the term montage refers to, and is the translation of, the English word editing. Stam sees Eisensteinian montage as a sub-code of editing (Stam, 1992: 49) whereas Bordwell sees it as an approach to editing developed in the 1920s by the Soviet filmmakers which relates to discontinuity editing and intellectual montage (Bordwell, 2001: 432). Despite these overlapping definitions, in contemporary filmmaking the term “montage” is generally used interchangeably with editing and the techniques first promulgated by Eisenstein have made their way into mainstream filmmaking.

Eisenstein's theories of montage provide an approach that enables the contemplation of montage firstly in terms of the creation of the mise-en-scene and cinematography of the shot or segment at the micro level, and secondly the way in which these shots or segments are linked in terms other than classic narrative progression and the construction of time, space and the dramatic three act structure at the macro level. Ultimately this approach provides a way of thinking about how to create and structure a narrative via means other than the classic three-act structure. These structures include the abstract and

associational systems (Bordwell, 1985: 129-130) of what has been variously termed the avant-garde, art-house, experimental or abstract narrative form.

As part of a discussion of the poetics of new media narrative, Eisenstein's theory of montage has important implications for any potential analytic and structural theory of narrative in new media. Eisenstein developed a detailed typology consisting of complex schema - metric, rhythmic, tonal, over tonal and intellectual for montage within the shot and montage between shots. In *The Cinema of Eisenstein* (1993), David Bordwell's concise overview of Eisenstein's work and life, Bordwell notes that Eisenstein was a polymath (somewhat like Manovich) – an engineering student, a theatre director, a graphic artist, a University lecturer, filmmaker and theorist. According to Bordwell, Eisenstein “is commonly thought of as a ‘formalist’ theorist... Like most of those working in the Soviet techne-centred trend, he refuses the standard concept of form as a vessel holding ‘contents’. Instead, he conceives form as a transformation of material in accordance with the art work’s social tasks...Form, as a dynamic process of construction, will therefore trigger the work’s effects” (Bordwell, 1993: 120). Eisenstein’s practical and theoretical work in fact evidences a development of the Russian Formalists’ film poetics as outlined in *Poetika Kino* (1927) (Bordwell, 1993: 136; Eagle, 1981: 30).

Eisenstein’s fusion of filmmaking practice with extensive theorising offers “a poetics of cinema, an explicit creative and analytical method derived from a reflection on craft techniques” (Bordwell, 1993: xi). Eisenstein’s reflections on film form, material and effect were quite prescriptive, but in the poetic tradition they link artistic practice to broader principles in the manner of scientific research. A brief overview of Eisenstein’s filmmaking, writing and lecturing oeuvre reveals a range of concerns which develop over time. (In a period spanning over 25 years, Eisenstein was prolific in writing manifesto-style articles, lectures and book chapters. Eisenstein’s theories were wide-ranging and open ended and continued to evolve throughout his life. Indeed almost half of his work still remains untranslated into English [Bordwell, 1992: xiii]). Broadly speaking, in the 1920s Eisenstein was concerned with the practical aesthetics of montage structure and style. In the 1930s, he was concerned with the organic unity of a film as a whole

particularly using the analogy of musical composition. In the 1940s until his death in 1946, he was concerned with the use of colour and its power to trigger emotions, as well as the creation of pathos and the expressive power of the artist (Eisenstein, 1949, 1974). It is not within the scope of this thesis to try to address all of Eisenstein or the other influential Russian filmmaking montage theorists, Kuleshov and Pudovkin's insights and reflections on cinema and montage. What is considered in this thesis is a key selection of Eisenstein's thoughts and examples from his practice. This will provide an insight into the significance of his poetics for a poetics of new media narrative. It will also highlight the crucial relevance of montage theory in film - in particular from Eisenstein's essays from the late 1920s - to the development of montage theory in new media narrative. These essays contribute significantly to an understanding of film form as they detail the choices regarding shot composition and montage facing the filmmaker in terms of how they shape the spectator's response. These essays are taken from Jay Leda's translation of *Film Form: Essays in Film Theory* (1949) and include: "The Cinematographic Principle and the Ideogram"(1929a) "The Filmic Fourth Dimension" (1929b), "A Dialectic Approach to Film Form" (1929c) "Methods of Montage"(1929d) and "The Structure of a Film (1929e). (To place these essays in the context of Russian Formalism in the 1920s, references to these essays below note the year of publication in the body of the thesis and cite the year of publication - 1949 - and page reference in the citation). Additionally Eisenstein's work from the 1930s on "Form and Practice" propounded in *The Film Sense* (1942) (also translated by Leda) is examined.

5.8 Eisenstein and Montage as Link

Eisenstein's assertions regarding the practical aesthetics of montage as a means of linking segments of film other than via plot are of interest. During his films of the 1920s Eisenstein developed the early Russian montage theorist Kuleshov's theory that the juxtaposition of two different images in film via collision or conflict will produce new meaning by association. Kuleshov's famous "actor and the bowl of soup" editing experiment made concrete the associational power of montage (Kuleshov, 1974: 192). In this experiment Kuleshov shot an actor's face in close up and shot two different scenes –

one of an open jail cell door and one of a bowl of soup. When both shots were intercut with the same actor's face, he was seen to appear to give two different expressions – one of longing for freedom and one of hunger. Kuleshov notes that he used this experiment to substantiate his claim that “apart from montage nothing exists in cinema, that the work of the actor is absolutely irrelevant, that with good montage it is immaterial how he works” (Kuleshov, 1974: 192). In film theory although Kuleshov's experiment is usually used as an exemplar of the power of montage to create meaning, Kuleshov was also at pains to point out that “the internal montage of the construction of the shot cannot be separated from the entire montage construction, from the montage of the shots”. Additionally he asserted that “The rhythm and meaning of the montage is not only derived from the interaction and interrelationship of the given segments ...but the montage also resides within these shots” (Kuleshov, 1974: 193- 195). For Kuleshov however montage was the tool of the director in conveying a certain message: “It is determined (by way of the ideological purpose) by the material itself, especially since the material of cinema is reality itself, life itself, reflected and interpreted by the class consciousness of the artist” (Kuleshov, 1974: 195). What is of vital interest is Kuleshov's concern with the montage of the *mise-en-scene* as well as montage between shots as conceptualised in Eisenstein's montage theory and extemporized in his work.

Although Eisenstein's ideas on the filmic image and montage were shaped by Russian Formalist literary theory – in particular Shklovsky and Tynjanov's work – he never worked nor collaborated with them (Bordwell, 1993: 136). In fact in the late 1920s while the Formalists were writing *Poetika Kino*, Eisenstein was immersed in creating some of film history's most important films – *Strike*, *Battleship Potemkin* and *October*. Additionally he avoids discussing the formal qualities or overall form of a work. For Eisenstein form could not be isolated from a social, ideological and political context whereas the Russian Formalists contemplated cinema from an artistic perspective. For this reason Eisenstein's detailed work on the shot and the montage point complement the Russian Formalists' more broadly based theories of montage and form as a means of addressing both the micro and macro effects of montage.

5.9 Eisenstein, Montage and Systems of Style

For Eisenstein the shot and montage are “the basic elements of the cinema” (Eisenstein, 1949: 48). He saw shots as not being “next” to each other but on “top” of each other – superimposed so that new dimensions are created (Eisenstein, 1949: 49). The power of montage is conceptualised in terms of the dynamic synthesis of these elements which results in conflict in both the space-time continuum and “the field of absolute thinking” which results in new viewpoints and concepts (Eisenstein, 1949: 46-47). For example, in “The Cinematographic Principle and the Ideogram”(1929a) Eisenstein precisely outlines a series of ‘cinematographic’ conflicts. These include:

- Conflict of graphic directions (lines – either static or dynamic);
- Conflict of scales;
- Conflict of volumes;
- Conflict of masses (Volumes filled with various intensities of light)
- Conflict of depths;
- And the following conflicts, requiring only one further impulse of intensification before flying into antagonistic pairs of pieces:
- Close shots and long shots;
- Pieces of graphically varied directions;
- Pieces resolved in volume, with pieces resolved in area;
- Pieces of darkness and pieces of lightness;
- Conflicts between an object and its dimension – and conflicts between an event and its duration;
- The compression of all cinematographic factors and properties within the single dialectical formula of conflict is no empty rhetorical diversion;
- We are now seeking a unified system for methods of cinematographic expressiveness that shall hold good for all its elements. The assembly of these into series of common indication will solve the task as a whole; Experience in the separate elements of the cinema cannot be absolutely measured (Eisenstein, 1949: 39-40).

In this taxonomy the elements of film that for Eisenstein are affected in the montage process are itemised – they are not “separate elements” and for Eisenstein must work as “a unified system”. They are major concerns for Eisenstein and he re-visits and develops their treatment in other essays of this period (1929b). They include what are termed in this thesis the elements affected in the “micro” processes of montage – the elements of the mise-en-scene. These include the composition of the shot and the perspective lines, shapes, volumes, depths and uses of light that contribute to the shot. They also include

the cinematography of the shot in terms of shot framing – the interrelationship between, for example, the use of close-up and long shot. As well Eisenstein’s insistence on the importance of “dialectical” conflict as a process of montage is examined.

In “A Dialectical Approach to Film Form” (1929b) (Also translated as “A Dramaturgy of Film Form” [Baudry and Cohen, 1999: 25]) Eisenstein further tabulates these conflicts in terms of what he terms “visual counterpoint”, or conflicts: of graphic direction, of scales, of volumes, of masses of depths of darkness and lightness, of focal lengths, which can be organized in terms of length, rhythm, tone, overtone or metaphor and used contrapuntally with sound (Eisenstein, 1949: 45- 63). He cites numerous examples which are helpful to an understanding of how these dialectical associations work. For example in his film *Strike*, there is a montage of the killing of workers intercut with the butchering of a bull in an abattoir. Although the content is different the audience is left in no doubt that the “butchering” is the associative link (Eisenstein, 1949:57)

Additionally of vital interest is Eisenstein’s mention of the idea of “audio-visual counterpoint” (Eisenstein 1949: 55) which he starts to develop in this essay and later develops in more concrete terms at the end of the 1930s in *Film Sense*, particularly in regard to his film *Alexander Nevsky* (discussed below). In the 1929 “A Dialectical Approach to Film Form” essay however, Eisenstein beds his conception of the creation of an organic cinema in terms of conflict and telescopes what will become one of his most important contributions to film theory – the concept of “visual dramaturgy”. Eisenstein contends:

Formulation and investigation of the phenomena of cinema as forms of conflict yield the first possibility of devising a homogeneous system of *visual dramaturgy* for all general and particular cases of the film problem.

Of devising a *dramaturgy of the visual film-form* as regulated and precise as the existing *dramaturgy of the film-story*.

From this viewpoint on the film medium, the following forms and potentialities of style may be summed up as a film syntax, or it may be more exact to describe the following as:

a tentative film-syntax

(Eisenstein, 1949: 55)(Italics Eisenstein’s own).

Here in the context of dialectical conflict, Eisenstein isolates Kazansky's concern with the "cinematurgical". In fact he uses the term "dramaturgy" in the visual sense as does Kazansky in *Poetika Kino* (1927: 120-121). Eisenstein validates the need to investigate film and devise a system of "visual dramaturgy" – the fusion of plot and style as motivators of story.

In "The Filmic Fourth Dimension" (1929c) Eisenstein retains the dialectical emphasis of "A Dialectical Approach to Film Form" (1929b) but offers a richer taxonomy of what occurs at the micro level of montage and elaborates even more on the montage of attractions, contending that one was always dominant while the others were subsidiary. This he terms montage "on the dominant" (Eisenstein 1949: 65). For example, joining shot A and B in terms of length might reduce the importance of content and composition and produce a completely new shot C. In "Methods of Montage" (1929d) Eisenstein develops his idea of the dominant and proposes the concepts of:

1. *Metric Montage* where the absolute length of the segment is paramount. Although in this scenario no notice of the content of the shot is taken it does concentrate on the formal characteristic of the establishment of a consistent beat from shot to shot.
2. *Rhythmic Montage* where the shot content determines the shot's length. For example, the custom of allowing a long shot more screen time than a close-up.
3. *Tonal Montage* conceived of as an expressive pictorial quality that pervades all the shots. For example, the gloom of the fog sequence in *Battleship Potemkin* is activated by tonal montage.
4. *Overtone Montage* takes into account "all the stimulants of the shot" (1949). Whereas the three aforementioned types of montage take into account editing on the basis of a dominant feature – shot length, overall content or prime expressive quality, overtone is considered a sensuous or physiological quality which results from the collision of the aforementioned types of montage.

5. *Intellectual Montage* is for Eisenstein the highest stage of montage form (1949: 72-83). Eisenstein provides as an example of intellectual montage the “Gods” sequence in *October* (1928) where a group of statues is turned into representations of conflicting ideas about deity. A baroque statue of Christ is followed by a series of idols from Buddha to carved primitive idols. Thus “enlightened” Christianity is intellectually associated with superstitious and primitive origins of religion. In *October* Eisenstein also intercuts between the battlefield and the home front and creates metaphors of oppression, for example, the Tsarist eagle swooping down on the defenceless troops (Adapted from Eisenstein: “Methods of Montage”, 1929d). (Italics Eisenstein’s own).

Even though Eisenstein complicates this above taxonomy of montage by overlaying it with his concept of the dialectic at the service of the political – that is these juxtapositions he has outlined should also be thought of in terms of conflict which must be resolved in the audience’s experience (Eisenstein, 1949: 78-80) – what he provides is an invaluable tool for the creation of cinematic narrative in new media. The new media designer is able to note that there can exist a hierarchy of qualities and elements within the image and that he or she can create a sequence by organising contrasting or harmonizing patterns out of these images. For the new media storyteller the processes of montage and linking both within and between shots at the micro level and as the way in which these processes build to create systems at the macro level of form may be contemplated in terms of the use of metrical, rhythmic, tonal, overtonal and intellectual associations and conflicts.

5. 10 A Graphic Presentation of Story, Structure and Form

Eisenstein worked to integrate all aspects of film into an organic system. In *Film Form* part of his work of the late 1930s, Eisenstein extended his theory of the use of the “image-sensual” structures to film music for, according to Eisenstein, like the visual image, music has its “approaching, receding, ripples, reflections and opalescence (Eisenstein, 1942: 162). Eisenstein discusses the question of correlating the audio and

the visual via the matching of a “strip of music and a strip of picture” such measured matching as would enable the audience to appreciate both such strips both vertically and horizontally. This is demonstrated in Eisenstein’s discussion of the “Battle on the Ice” sequence of his film, *Alexander Nevsky* (1938) (See Table 5.1) which involves the “attack of the knights” and the “punishment of the knights”(Eisenstein, 1975: 174). Eisenstein’s analysis of this sequence is unique in film theory as it provides an exemplar of a detailed analysis of the “global stylistics” of a film. As such it provides a significant insight into what constitutes the “cinematic” as it contributes to the creation of film form.

In his analysis of the “Battle on the Ice” sequence, Eisenstein traces the movement of the music and the movement of the eye over the pictorial composition and ties it with the emotional involvement of the audience (1975: 174-179). Eisenstein analyses the method in which anxiety is conveyed in the sequence prior to the attack of the knights by examining the sequential correspondences between rhythm and cadences of the music and the pictorial movement in the shots (Eisenstein, 1975: 178-179). He carefully compares the “path” of the music with the “path” the eye is obliged to take by graphical compositions created in the sequential montage of the battle shots and concludes that “*a complete correspondence between the movement of the music and the movement of the eye over the lines of plastic composition*” may be found (Eisenstein, 1975: 178). (Emphasis Eisenstein’s own). In his work on the “Battle on the Ice” sequence Eisenstein extends the Russian Formalists’ ideas about the interrelationship between film and film music. Eichenbaum in particular makes note of the potential relationship between musical rhythms and emotion and the mise-en-scene and montage of film but does not develop this idea in detail. “Music has taken on the role of emotional intensifier and accompanies the process of internal speech’ (Eichenbaum, 1927: 63). “In contemporary cinema we have ... some kind of general rhythmically ... but that is a matter for the future... perhaps at that time special rhythmic genres will be defined, based not on plot but on photogenic properties” (Eichenbaum, 1927: 64-65). It is also relevant to note that Eisenstein’s graphic representation of the parallels between the dramaturgical and cinematic aspects of the “Battle on the Ice” sequence are markedly similar to the graphic interface of the new media software programs, *MacroMedia Director* or *iMovie*.

Eisenstein's theory provides a concrete means of approaching the composition of the varying "fragments" of film either at the level of the individual shots or the level of sequence. The importance of these elements therefore may be considered at both the "micro" level - the composition of the individual mise-en-scene of each shot as it builds towards the "macro" level in terms of its Formalist functioning when combined with other fragments or segments via the process of montage. As Eisenstein notes the power of montage as an element of the cinematic process makes a creation which is much greater than the sum of its parts:

The basic fact was true and remains true to this day, that the juxtaposition of two separate shots by splicing them together resembles not so much a simple sum of one shot plus another shot – as it does a creation. It resembles a creation – rather than the sum of its parts – from the circumstances that in every such juxtaposition the result is qualitatively distinguishable from each component element viewed separately (Eisenstein, 1942: 8).

5.11 Manovich and Eisensteinian Montage

The relevance of Eisensteinian montage for more abstract new media narratives like *Of Day, Of Night* and *Mission to Earth* is crucial. This is because the computer database is controlled by a machine - the computer search engine - which must be coded with specific instructions. Even though the story may be abstract the machine still needs information to tell it what to do, in effect it needs information that relates to the cognitive process involved in creating and viewing more abstract narrative forms. In the essay "A Dialectic Approach to Film Form" Eisenstein describes how the shot may become a complex cognitive manifestation of all its entities resulting from a dynamic synthesis of the oppositions of the shots:

The montage is built not on particular dominants, but it takes as its guide the total stimulation through all stimuli. That is the original montage complex within the shot, arising from the collision and combination of the individual stimuli inherent in it...The basic indication of the shot can be taken as the final summary of its effects on the cortex of the brain as a whole, irrespective of the paths by which the accumulated stimuli have been brought

together. Thus the quality of totals can be placed side by side in any conflicting combination, thereby revealing entirely new possibilities of montage solutions (Eisenstein, 1942: 67).

However new media theorists like Manovich have failed to see the significance of Eisenstein's theories for the building of systems that can generate abstract form.

In *The Language of New Media* Manovich prefers to consider Eisenstein's theories in terms of their perceived treatment of space and time. Manovich notes:

Sergei Eisenstein already used the metaphor of many-dimensional space in his writings on montage, naming one of his articles "The Filmic Fourth Dimension". However, his theories of montage ultimately focussed on one dimension – time. Eisenstein formulated a number of principles, such as counterpoint, that can be used to coordinate changes in different visual dimensions over time. The examples of visual dimensions he considered are graphic directions, volumes, masses, space, and contrast. When sound film became a possibility, Eisenstein extended these principles to handle what, in computer language, can be called a "synchronization" of visual and audio tracks; and later he added the dimensions of colour. Eisenstein also developed a different set of principles ('methods of montage') according to which different shots can be edited together to form a longer sequence. The examples of 'methods of montage' include metric montage, which uses absolute lengths of shots to establish a 'beat', and rhythmic montage, which is based on pattern of movement within the shots. These methods can be used by themselves to structure a sequence of shots, but they can also be combined within a single sequence (Manovich, 2001: 156-157).

Manovich's recognition of Eisenstein's theory is acknowledged, but his assertion that Eisenstein was only concerned with the temporal rendering of events is too simplistic a comment and neglects to appreciate the relevance of Eisenstein's theories of montage to new media narrative. Eisenstein's total approach to montage was bound up in the concept of the cognitive effect on "the cortex of the brain" (Eisenstein, 1942: 67).

Although Eisenstein acknowledged the importance of the temporal in the rendering of montage in the time of projection or reception, temporality as an organising factor was not important as such, rather it afforded the more important aspect of visual overtone. Eisenstein stressed the importance of what is termed "the cinematurgical process" in

this thesis. In “The Filmic Fourth Dimension” in considering the relationship between visual and musical overtones in particular, Eisenstein notes:

Both emerge as genuine values only in the dynamics of the musical or cinematographic *process*.

Overtonal conflicts, foreseen but unwritten in the score, cannot emerge without the dialectic process of the passage of film through the projection apparatus, or that of the performance by a symphony orchestra.

The visual overtone is proved to be an actual piece, an actual element of – a fourth dimension!

In three-dimensional space, spatially inexpressible, and only emerging and existing in the fourth dimension (time added to the three dimensions).

The fourth dimension?! Einstein? Or mysticism? Or a joke?

It’s time to stop being frightened of this new knowledge of a fourth dimension (Eisenstein, 1949: 69) (Emphasis Eisenstein’s own).

It is Manovich’s insistence that “film technology, film practice, and film theory privilege the temporal development of a moving image”, and that “computer technology privileges spatial dimensions”, that undermines the narrative capabilities of new media as a medium for storytelling. Manovich’s theorising about new media sees the graphical dimensions of the new media object as the key new dimension of the new media object’s logic.

Manovich states that:

The new logic of a digital moving image contained in the operation of compositing runs against Eisenstein’s aesthetics with its focus on time. Digital compositing makes the dimensions of space (3-D fake space being created by a composite and 2½-D space of all the layers being composited) and frame (separate images moving in 2-D within the frame) as important as time (Manovich, 2001:157).

A number of points are relevant here. The notion of fragments assembled by a machine is not new in computer or cinematic theory. What is new is that because of the computer and the principles of modularity, automation and variability as theorised by Manovich is the fact that random access to data is enabled by the computer. It is the computer that facilitates the processes of ordering and re-ordering elements of the time-based linear medium of film. Contrary to what Manovich implies, Eisenstein and before him the Russian Formalists, theorised of the power of juxtaposition in montage and the art of montage. Eisenstein’s theories of montage do address the spatial, moreover they can be

understood more in terms of what Eisenstein is saying about space rather than time. However in his theories of montage it can be seen that Eisenstein was interested in the relationship between two juxtaposed shots and the internal relationships of the elements of the mise-en-scene of each shot. His use of montage as collision ultimately can be seen to be in line with the Russian Formalist idea of “ostraneniye” or “defamiliarization” which as noted earlier aimed to “shock” or make the audience sit up and notice the working of the object as a means of enhancing its impact. Moreover Eisenstein utilizes time as a dramatic as well as aesthetic element in his work. For example in the *Odessa Steps* sequence of *Battleship Potemkin*, Eisenstein both compresses and extends time to dramatic effect.

By considering montage as “polyphonic” and vertical, Eisenstein’s theories provide a means by which to consider montage as the organizing factor for what may be regarded as avant-garde stylistics at the micro level in both classic narrative and avant-garde narrative structure. Additionally at the macro level, Eisensteinian montage can be used to understand the various non-causal and non-dramatic associations that form the bedrock of narrative form in an avant-garde narrative structure. In avant-garde form montage in Eisenstein’s terms can be seen as a method by which a film creates and renders a formal unity or artistic form. The principles of montage unfolding over time via systems inevitably unique to each film “reproduce the process through which new images are built up in the mind of a person in real life” (Bordwell, 1993: 190).

5.12 Eisensteinian Film Theory and Cinematic Storytelling Practice

Eisenstein found and theorized a way of organizing the text at every level. For Eisenstein it was the thematic image that bound all the visual and sonic motifs together (Bordwell, 1993: 268). The importance that Eisenstein placed on montage both between in terms of the associations made possible by montage and the montage within the shots in terms of conflicts are just one of the theories of film editing. In contrast, for example to Bazin’s insistence on a more realistic portrayal of mise-en-scene via montage in depth, Eisenstein’s montage theory can appear very contrived. However in the realm of film

theory and practice it has been a most influential means of contemplating the importance of montage and mise-en-scene and has influenced key filmmakers. An appreciation of the complexity of mise-en-scene for example in Pedro Almodovar's *Almost All About My Mother* (1999), Kieslowksi's *Three Colours Trilogy* (1993-1994) and Jean-Jacques Beineix's *Betty Blue* (1986) bear witness to Eisenstein's innovative work.

Avant-garde cinema in particular can be seen to extend Eisenstein's philosophy. For example Peter Wollen's influential *Signs and Meaning in the Cinema* traces Eisenstein's ideas to various threads in avant-garde film thought (Wollen, 1972: 60). Eisenstein's stylistic innovations such as "conflicting" editing, audiovisual polyphony and complexity and his attention to the importance of montage and mise-en-scene and their ability to create complex intellectual association as the key factors in creating films recurrent patterns of style at the level of graphic design, cinematography, mise-en-scene and montage achieved a unity that was both artistic and theoretical. Bordwell contends:

Eisenstein's organic conception of the artwork and his specific elaboration of this along the lines of musical analogies must be reckoned as one to the major accomplishments in the history of film theory. No writer before him had proposed an account of the overall stylistic organization of a film; theorists such as Arnheim, Kuleshov, and Pudovkin concentrated on understanding how isolated technical choices might have local narrative or expressive value. Like them, Eisenstein takes for granted that the film has a plot that style will articulate. He thus does not pose basic questions of narrative... Nonetheless Eisenstein's essays and his pedagogical work offer structural stylistics, a dramaturgy of film form, that provides an account of how techniques may cooperate to create a unified context and an expressive effect (Bordwell 1993: 190).

Of key interest to this thesis both in terms of methodology and content it is noted that in the Aristotelian tradition Eisenstein's work may be regarded as a poetics of film style. Bordwell argues that although elements of Eisenstein's theoretical writings are often quite dogmatic or incomplete, for example his theories of emotion and his remarks on the artistic image are written within the framework of a Marxist dialectic, nonetheless they constitute cinema's major "poetics of film style unprecedented in its comprehensiveness and detail" (Bordwell, 1993: 269-271). Like Aristotle, Eisenstein makes the distinction

between form and material and focuses on how one creates film via pattern and texture. Eisenstein analysed film form in terms of its dynamic processes such as overtone and vertical montage or at the service of the “dominant” or “artistic image”. He tabulated the material of film in terms of the cinematic parameters of the visual image – mise-en-scene, graphics, cinematography and audio-visual correspondences. Ultimately like the Russian Formalists, Eisenstein worked in the Aristotelian tradition of poetics in his attempt to show what formal principles create an effective artwork.

5.13 Montage and Style in the *Poetics of Mosaic Narrative*

The *cinematurgical* as noted earlier consists of the *dramaturgical* and the *cinematic*. The *dramaturgical* as discussed in Chapter Four relates to the causal articulation of the classic three-act Aristotelian dramatic structure whether it be via the temporal or spatial ordering of narrative in chronological time or via more complex parallel narrative forms (Aronson, 2000a). In this chapter thus far the linking of narrative at the micro level by parameters other than time, space or narrative progression has been examined. The linking of narrative via montage, in particular Formalist and Soviet Montage theory has been the focus. This has provided a means by which the *Cinematic Narrative Syntagma* may be conceived at the micro level as an element of the cinematic as well as the *dramaturgical* aspects of cinematic new media narrative.

In summary therefore at the *Story Moment* the cinematic component of the proposed notion of the *cinematurgical* is a crucial focus. The treatment of this component involves the following relations both within and between the digital shot or *Cinematic Narrative Syntagma* and leads to the tabulation of that element of the *Poetics of Mosaic Narrative* that impacts on interactivity in terms of the visual elements and devices of the film enacted at the micro level as understood in Eisenstein’s terms.

1. Mise-en-scene: Colour, Lighting, Composition, Graphical contrasts
2. Cinematography: Camera Movement, Framing, Film Contrast,
3. Montage: Metric, Rhythmic, Tonal, Overtone, Intellectual

In the next section these elements will be contextualized in the new media environment by using them to contemplate the aesthetics and form of Manovich’s *Mission to Earth*.

5.14 Montage at the Macro Level - the Creation of Film Form via Association

One of the most important ramifications of Eisenstein's system of attractions, dominants, and dialectical collisional montage lies in its ability to create new associations for the viewer. While plot-dominated narrative theory sees the techniques of montage as an aid to the narrative, Eisenstein constructed montage in opposition to straight narrative. For Eisenstein if shot A and shot B are to form a completely new idea, the audience had to work to understand the meaning of the montage. In his concept of intellectual montage activated by the juxtaposition of varying images, Eisenstein worked towards the creation of paradigms or classes of objects linked by intellectual or metaphorical association to create abstract ideas. In effect the segments of film are not mere reflections of reality which "carry" a narrative, but they become similar to a database and become a stock of raw material or "attractions" that the filmmaker arranges as he or she sees fit. It is this notion of authorial intention as the creator of film form that Eisenstein sees as reflected in the audience's experience of the film:

The strength of montage resides in this, that it includes in the creative process the emotions and the mind of the spectator. The spectator is compelled to proceed along that self-same creative road that the author travelled in creating the image. The spectator not only sees the represented elements of the finished work, but also experiences the dynamic process of the emergence and assembly of the image just as it was experienced by the author (Eisenstein, 1942: 32).

It is recalled that Kazansky proposed that montage constitutes the "dramaturgy" of film form. Kazansky noted that cinema "still does not have its own 'language' which would allow the cinematic craftsman to 'think in frames' in the same way that a poet thinks in verbal images" (Kazansky, 1927: 77-78). Eisenstein's poetics of cinematic construction as a means of how the filmmaker might "think in frames" certainly offers an answer to this dilemma. Eisenstein's poetics of montage, as Piotrovsky observes are the foundations of "as yet undefined ... a genre...standing even farther from dramatic and narrative canons and even more original in its treatment of time and space...they base their works on exclusively cinematic means of expression, on new and unexpected juxtapositions of

images, employing non-narrative, intrinsically cinematic devices, such as associative montage” (Piotrovsky, 1927: 144-145).

The associational power of montage and its contribution to film form is also a focus of the *Soft Cinema* project. In the literature accompanying the *Soft Cinema DVD*, Andreas Kratky, Manovich’s collaborator on part of the project, provides an account of the role associative montage in Kratky’s new media narrative, *Absences*. Kratky notes:

My idea for this *Soft Cinema* edition was to create a film without a pre-formulated narrative. I started with two assumptions. Firstly that meaning and narrative coherence can be created through associative chains. Secondly – presuming that human perception works to connect images that are presented together and to integrate them into a coherent, meaningful structure – that it is possible to create these associative chains through the visual properties of the image (Kratky, 2005: 30).

With *Absences* it is arguable as to whether Kratky has created any kind of narrative via what is regarded in film theory (Bordwell, 2001: 135) as the avant-garde concept of association. In *Absences* the visuals – in highly stylised black and white - are quite commendable. There is a sense of the male character being “absent” from an engagement with both his surroundings and life itself – something in line with Davenport’s Interactive Cinema modus operandi of the observational documentary rather than narrative. In the final analysis the basic premise of Kratky’s narrative – that of the “visual properties of the image”- does not lead itself to creating a narrative either in the three-act classic sense or the more loosely structured avant-garde sense. This is not to say that what “happens” must be enacted in terms of the classic narrative structure - this is obviously not the type of structure Kratky is seeking to create. However for both Kratky and Manovich’s aim to tell interactive computer based stories with “coherent, meaningful structure” to be better actualised, a consideration and application of avant-garde film theory and the creation of a stylistics of the visual as a formal system that can build avant-garde structures, would prove most helpful. In the *Soft Cinema* project, the avant-garde, although championed as a means of structuring a narrative as a formal system, is solely reliant on the montage of visual and graphical association. The storytelling functions – whether classic or avant-garde – are somewhat tenuously developed.

5.15 The Avant-garde as a Formal Structure in New Media Narrative

In this section the concept of avant-garde film structure that may be used for the coding and enrichment of Manovich's *Soft Cinema* search engine is proposed as a formal structure for new media narrative. In film theory the term avant-garde film is used interchangeably with experimental film (Bordwell, 2001: 128) or art film. The term "art film" (or art-house film) is generally used to categorize "foreign films with intellectual and aesthetic aspirations" (Cook, 1981: 960). In this thesis the term avant-garde film is used to encompass the terms avant-garde film, experimental film and art film. Avant-garde films are impossible to encapsulate in a formula but they are "recognizable by their efforts at "self-expression or experimentation outside mainstream cinema" (Bordwell, 2001: 129). They are films that set out to challenge mainstream or multiplex notions of cinematic storytelling. They are usually made by independent filmmakers or the members of a group whose themes and/or techniques include a rejection of mainstream cinema. This is the case in, for example, the work of the French Impressionists and Surrealists of the 1920s, the German Expressionists of the 1920s, the American Avant-Garde of the 1940s, the French New Wave of the 1960s and the experimental video artists of the 1970s.

Montage, as was noted above, is seen as the essential element in creating the stylistics of cinema by the Russian Formalists and is of critical interest when considering the concept of interactivity in new media narrative. The importance of montage at the micro level of narrative structure and form was examined by re-visiting the theory and practice of the Formalists' contemporary, Sergei Eisenstein. In the consideration of his extensive work, the concept of the cinematic was developed by aligning Eisenstein's quite detailed and prescriptive findings regarding the "practical aesthetics" of montage in terms of mise-en-scene, cinematography and music, with Bordwell's Neo-Formalist assertions about the operation of style as a formal system. These findings were tabled in Section 5.13 to develop a taxonomy of the parameters of montage in terms of its micro function at the edit point.

Kazansky's definition of *cinematurgy* as the driving paradigm of narrative in new media was re-activated and built upon. The original concept of *cinematurgy* as constituted by the element of dramaturgy and the cinematic was propounded. The notion of dramaturgy as the structured and dramatic unfolding of the syuzhet or plot of the film in terms of Aristotle's notion of catharsis or the orchestrating of the audience's emotions was introduced. The functioning of the three-act dramatic structure as the dramaturgical basis for narrative in both classical and complex or multi-strand narrative cinema and thus cinematic narrative in new media, was discussed. The essential dilemma the Russian Formalists faced between the operations of the formal structure of a film as enacted by plot on one hand and by style on the other, was also examined. It was found that Kazansky and Tynjanov in particular, were drawn towards a more avant-garde style of cinema as a means of realizing the fabula or story. The notion of the avant-garde as a structural, as well as formal system is canvassed below.

The functioning of avant-garde structure and form also has a two-fold functioning that may be conceptualised as the "micro" and "macro" level of narrative form in terms of montage. At the "micro" level, montage as it contributes to avant-garde form may be considered in terms of Eisensteinian montage theory as discussed above. At the "macro" level, montage may be considered in terms of Bordwell's Neo-Formalist cinematic stylistic systems created via montage to create avant-garde narrative structure and form.

In Manovich's *Mission to Earth*, Kratky's *Absences* and Heyward's *I am a Singer and Of Day, Of Night*, it was seen that it is not uncommon for new media narratives to centre on the concept of memory as the de facto organising force, whether the narrative is activated by plot or stylistic features. In these exemplars it was demonstrated that the narratives are somewhat haphazard in their systems of narrative and stylistic articulation. This is not because the creators have resorted to the convenient "catch-all" narrative form of the dream or stream of consciousness, but rather that these storytellers do not have a poetics of the syuzhet guiding the structured articulation of fabula via more avant-garde means. In this section Bordwell's theories of Art-Cinema narration (Bordwell, 1985; 205-232) are used to develop a structure for the dramaturgy of the macro form of avant-garde

narrative. As was demonstrated for the classic three-act dramatic structure, avant-garde narrative can be characterized by a structure that functions to orchestrate the emotions of the audience in Aristotelian terms.

Formalist film theory posits that montage and systems of style are among the key elements used to create avant-garde film structure. An examination of Formalist film theory in this thesis has established that the use of a film's style cannot be studied in isolation from its overall form. In a narrative film, style can function to advance the causality of the narrative. The examples of *Run Lola Run*, *Amores Perros* and *American Beauty* considered in this thesis bear testament to this. In particular it was observed that style might attract attention to itself and ultimately via the techniques of montage serve to create systems that advance the flow of story material. No one film uses the entire battery of stylistic features, neither does any one film use style in isolation as the formal system. However as has been demonstrated in the films *Run Lola Run*, *Amores Perros* and *American Beauty*, directors evidence a precise and calculated awareness of the importance of the stylistic features of mise-en-scene, cinematography, montage and sound as key aspects of their filmmaking, to create both structure and form.

5.16 Creating Avant-garde Structure and Form in New Media Narrative

The 1940s and 1950s American avant-garde filmmaker, Maya Deren, is an important experimental filmmaker and theorist of the avant-garde who recognized the role structure plays in creating avant-garde form. In "Cinematography: The Creative Use of Reality" (1960), Deren argues for cinema to become an art form by relinquishing the "narrative disciplines it has borrowed from literature" and instead "develop the vocabulary of filmic images and evolve the syntax of filmic techniques which relate to these. It must determine the disciplines inherent in the medium, discover its own structural modes, explore new realms" (Deren, 1960: 227). Deren's films appear to be a "vertical" investigation of a theme or situation in which, as a filmmaker, she is less concerned about what is happening in plot terms but rather what the situation feels like or what it means.

The themes of the “search for identity”, the “need to escape” and “dwelling on anxieties”, as well as a disregard for traditional portrayals of time and space, are popular features of Deren and other avant-garde filmmaker’s work (Giannetti, 1982: 385-387).

In Deren’s *Meshes of the Afternoon*, like Manovich’s *Mission to Earth* and Heyward’s *I am a Singer*, the premise is that of the personal film. Deren’s *Meshes of the Afternoon* (1943) demonstrates a Surrealism influence with its juxtaposition of disparate elements. Deren’s creation of a dream-like mise-en-scene, the creation of flowing and repeated movement via both cinematography and movement within the shot and the ephemeral soundtrack create a contemplative experience. The overtones of the film are nightmarish as the distraught and emotionally disturbed protagonist (played by Deren herself) becomes increasingly terrorized by a series of seemingly trivial incidents. In *Meshes of the Afternoon*, meaning is built by the cyclic unravelling of successive versions of the same event – a woman’s murder of her lover. The opening sequence establishes the recurring nightmare of the dream-like event – the repetition of a set of stairs, a knife, a key and the hooded figure – all continually out of reach. Discordant images and events are presented – there are mismatching eye-line shots and a record player plays silently. The record player has no relation to the musical soundtrack, instead a drumbeat is synchronized to movement and the cut. Eisensteinian rhythmic montage, the editing and movement both within and between shots are attenuated by the rhythm of the soundtrack.

The montage processes and systems set up in *Meshes of the Afternoon* can be interpreted as creating “acts” or movements, if one is to subscribe to the musical analogy that Robert McKee uses to describe the structure of this film (McKee, 2003: Unpublished workshop paper). The first act, what may be called the “Dreamer Number One” sequence, runs for approximately three minutes and is the introductory sequence where a mannequin’s arm is seen reaching from above and dropping a flower. Next a knife appears. Then a world of images of broken communication – doors, newspapers, photographs, a phone off the hook - is created. A black curtain blowing in a bedroom window appears. In the second act, what may be called the “Dreamer Number Two” sequence, a black shrouded figure with a mirror face appears. A woman advances along a walk holding a flower. The

hooded figure - perhaps Death - turns to a woman and her face is shown reflected in his face. The woman chases the hooded figure but never catches him. The figure moves to the stairs then the bedroom. The woman pulls back the bedcover to reveal the knife but her own face is reflected in it. Communication is broken. The woman takes the needle off the record player. Dreamer Number Two looks at the window and sees Dreamer Number Three – a reflection in the window. “Dreamer Number Three” goes to the window and follows Death up the stairs. Death takes the flower and puts it on the bed. The three dreamers sit around a table and draw lots to see who will murder Dreamer Number One. Two hands are painted white, one is painted black. “Dreamer Number Four” wakes up and finds a man near her. In the fifth movement the man wakes Dreamer Number Four and it appears to the audience that this is the reality of the film. The man places the flower on the woman’s bed in the exact position that the knife has been in a previous dream. His face is reflected in the mirror. The flower turns into a knife. The man starts to make love to the woman. Her eye moves over to the knife. The mirror shatters out of reach. In the sixth movement the woman is seen with the shattered pieces of glass, the newspaper is on the floor. Dreamer Number One, the woman is dead.

The structure of this avant-garde film thus analysed comprises both abstract and associational form. It resembles a dream or a dream within a dream. It appears to the viewer that each new version of the event reviews the earlier interpretation so that in effect, it builds a multifaceted ambiguous layering of reality. Deren has theorized such structures in terms of horizontal and vertical planes of development (Deren, 1960: 224-225). The drama moves forward on the horizontal plane – the narrative. Layers of meaning are added by repeating the same sequence of events with changes – the vertical plane. In effect the film creates a story mosaic of various dream sequences and images that cohere around the murder of the lover. It is also interesting to note that the structures of Deren’s experimental cinema of sixty years ago have been taken up in modern cinema in Christopher Nolan’s *Memento* (2001) where the narrative builds upon itself by the backward chronological spiralling of repeated sequences. As is shown in the following section, it also has significant parallels with Manovich’s *Texas* and *Mission to Earth*, as well as Kratky’s *Absences* and Heyward’s *Of Day, Of Night*.

Overall *Meshes of the Afternoon* is evocative and creatively executed, often tending towards a Surrealist or Impressionistic cinematic style, explored via multiple pathways and linked via a simple narrative concept. In terms of this thesis, Deren brings a Formalist perspective to the structure of avant-garde narrative with her insistence on the foregrounding of the filmic device and its artistic function. She also brings a Structuralist perspective with her search for a structure, particularly a structure focussing on the treatment of time in the cinematic domain. Of particular interest is Deren's assertion regarding the importance of montage both as an artistic tool and as a method of establishing the systems of a film:

The images of film deal with realities which... are structured to fulfil their various functions, not to communicate a specific meaning. There they have several attributes simultaneously, as when a table may be, at once, old, red, and high...The editing of a film creates the sequential relationship which gives particular or new meanings to the images *according to their function*...Whether the images are related in terms of common or contrasting qualities, in the causal logic of events which is narrative, or in the logic of ideas and emotions which is the poetic mode, the structure of the film is sequential (Deren, 1960: 224). (Emphasis Deren's own).

It is evident that for Deren this sequential nature of film makes film a time form even though it is composed of spatial images. For her therefore, like the Russian Formalists, the creative act of filmmaking is based on montage. In Deren's terms this consists of the manipulation of time and space but not via the techniques of, for example, flashback and parallel action, but by the manipulation of time as part of the organic structure of the film. In this instance Deren cites, for example, the filming of a staircase that may be extended by the filming of different shots or different angles of a person ascending it that could be seen to recall Eisenstein's *Odessa Steps* sequence. Deren also notes that by the manipulation of time and space she means the creation of relationships between different times, places and characters (Deren, 1960, 224-335).

It is important to the argument of this thesis to note that as a recognized and important theorist of the avant-garde (Giannetti, 1982: 385), Deren has validated a number of the contentions presented regarding the importance of editing and montage in the creation of

the process of narration in avant-garde film. Firstly, she has noted the fact that montage is the key structuring tool of avant-garde cinema. Secondly, in both her theory and practice, Deren has validated Eisenstein's work - for example the creation of rhythm and pattern via editing, the manipulation of time and the importance of intellectual montage. Finally, Deren has emphasized the importance of the Formalist notion of the functioning of the filmic device as it both constitutes and creates the overall form of an artistic object.

5.17 Theorizing the Structural and Formal Nature of Avant-Garde Cinema

In this section a theory of avant-garde narrative structure and form is formulated for the coding of more abstract new media narratives such as *Of Day, Of Night* and *Mission to Earth*. The perceived lack of structure that is a feature of the non-linear nature of an avant-garde film narrative may in fact conform to a structure pre-ordained by the artist or new media designer. In the experimental film, *Meshes of the Afternoon*, it is the structure of the spiralling replays of the same event; in *Of Day, Of Night* it is the structure imposed by the concept of memory. Artists like Heyward appear to be much less Structuralist and more intuitive in their approach to the design of narrative. For example, Heyward's belief that the storyteller must "let narrative find the shape" (Heyward, 2002) would seem to dismiss the study of avant-garde narrative as appropriate to developing a Structuralist theory, underlining the fact that even what would seem to be a liberated, unstructured and loosely connected narrative is actually very carefully crafted by an artist. The challenge for new media practitioners is to design the software to enable a narrative trajectory that encompasses the parameters of avant-garde film structure and form. This challenge is addressed by considering Bordwell's (1985, 2001) theories of art cinema.

Bordwell asserts that Abstract form and Associational form are the two main forms characteristic of experimental filmmaking (Bordwell, 2001: 129). According to Bordwell, Abstract form will usually operate on the premise of "theme and variation" (Bordwell, 2001: 130). Bordwell contends that an Abstract film will typically introduce the types of relationships that the film will use as its "basic material" in an introductory sequence (Bordwell, 2001: 130). The film will then develop in subsequent sequences with

gradually diverging variations and patternings of these relationships. This was the case in Deren's *Meshes of the Afternoon*. Finally Bordwell asserts, "If the film's formal organization has been created with care, the similarities and differences will not be random. There will be some underlying principle that runs through the film" (Bordwell, 2001: 130). As an example of Abstract form Bordwell deconstructs the French Impressionist film, *Ballet Mecanique* (1924). However Deren's *Meshes of the Afternoon* also demonstrates characteristics of abstract form in its cyclic re-working of the girl ascending the stairs and the murder of her lover. Additionally it demonstrates the avant-garde characteristics of what Bordwell terms Associational form (Bordwell, 2001: 129).

Associational form according to Bordwell is characterized by a poetic series of transitions that create an association. "Associational formal systems suggest expressive qualities and concepts by grouping images that may not have any logical connection. But the very fact that the images and sounds are juxtaposed prods us to look for some connection – an association that binds them together" (Bordwell, 2001: 135). Again *Meshes of the Afternoon* demonstrates qualities of Associational form with its grouping of disparate objects and images to suggest the dreamlike existence of the woman. As Bordwell notes, Associational form can work at a local level in terms of various sequences but also "Associational form creates large scale patterns that can organize an entire film" (Bordwell, 2001: 136). Bordwell proposes three main features of the avant-garde film that demonstrates an Associational form. Firstly, images are typically grouped together in larger sets to create distinct and unified sections of the film which are then contrasted with other groups of images. Secondly, repeated motifs are used to reinforce associational connections as, for example, the knife in *Meshes of the Afternoon*. Thirdly, according to Bordwell, associative form "invites interpretation, the assigning of general meanings to the film" (Bordwell, 2001: 136). Such is the case in, for example, the Australian filmmaker Tracey Moffat's avant-garde film *Night Cries: A Rural Tragedy* (1989) which builds up banks of images relating to motherhood, age, the landscape, the stolen generation and Christianity in her exploration of what it is like to be an Aboriginal child raised by the white mother she loves and cares for in her dying days.

In *Narration and the Fiction Film* (1985) Bordwell provides a broad model of avant-garde cinema in his discussion of “Art-Cinema Narration”. (Although as has been previously noted in Chapter Two, Bordwell is insistent that his theories are Formalist not Structuralist, nonetheless there is some “cross-over” between the two theories in his work). Although Bordwell does not delineate between Abstract and Associational form in his discussion of Avant-garde narrative in *Narration and the Fiction Film*, he nonetheless posits a more concrete analysis of the structural features of avant-garde film narration. Bordwell contends “in general causal connections in the fabula are weakened” with significant “gaps”, “parallelisms come to the fore” with “chance” playing a major factor in the film (Bordwell, 1985: 206-207). According to Bordwell, there is also more emphasis on character than on plot. In particular the character is often placed in what Bordwell terms a “boundary” situation in which “the causal chain leads up to an episode of the private individual’s awareness of fundamental human issues” or a crisis situation of “existential significance” (Bordwell, 1985: 208). Bordwell’s “boundary situation” is essentially what Aronson terms the pivotal point of the multi-form narrative. In both avant-garde cinema and in classical narrative cinema this boundary situation is generally the crisis but it also may be the catalyst or inciting incident as well. Bordwell terms it a “formal centre” (Bordwell, 1985: 208). For example, in the avant-garde film, *Meshes of the Afternoon*, the boundary situation is the murder of the lover; in the new media narrative, *Mission to Earth*, it is Inge’s decision of whether or not to take the space ship back to Alpha-1; in the multi-strand narrative *American Beauty* it is the rape/death of the teenager. According to Bordwell the “formal centre” also serves as a “focus on a situation’s existential import”, it “motivates characters’ expressing and explaining their mental states. Concerned less with action than reaction, the art cinema presents psychological effects in search of their causes...Characters retard the movement of the syuzhet by telling stories – autobiographical events (especially from childhood), fantasies and even day dreams” (Bordwell, 1985: 208). A character’s mental state also usually is complemented by the stylistics of the film. As Bordwell asserts, “Spatio-temporal expressive effects” come to the fore; “the art cinema developed a range of mise-en-scene cues for expressing character mood: static postures, covert glances, smiles that fade, aimless walks, emotion-filled landscapes, and associated objects” (Bordwell, 1985: 208-

209). Therefore the syuzhet can utilize techniques to enact the processes of the mind. “Dreams, memories, hallucinations, daydreams, fantasies, and other mental activities can find embodiment in the image of on the sound track” (Bordwell, 1985: 208). Although he mentions the fact that “conventions of expressive realism can shape spatial representation: optical point-of-view shots, flash frames of a glimpsed or recalled event, editing patterns, modulations of light and colour and sound” are motivated by character psychology (Bordwell, 1985: 209), Bordwell neglects to highlight the vital importance of montage in this interplay of mise-en-scene and character motivation. This is the case at both the “micro” level as an element of the graphic montage of expressive elements within and between shots as, for example, in the German Expressionist film, *The Cabinet of Dr Caligari* (1920). Here the graphically distorted mise-en-scene presents a visceral sense of Dr Caligari’s evil and deformed character. At the “macro” level it may be evidenced in Eisenstein’s sense of intellectual montage and character motivation. Bordwell considers that “overt narrational ‘commentary’” is another significant characteristic of avant-garde narration. For Bordwell, this may include the deliberate use of the techniques of film to “highlight” a point, for example by the use of an unusual angle, or as the actual commentary of the narrator (Bordwell, 1985: 209). The final feature of avant-garde cinema that Bordwell considers as elemental in *Narration and the Fiction Film*, is the notion of ambiguity that pervades art cinema narration. For Bordwell this evidences itself in the ambiguous ending, the ambiguity of events in their meaning and the often-ambiguous motivations and connections between events (Bordwell, 1985: 212-213). In *Film Art* (2001) Bordwell analyses the French New Wave filmmaker Jean-Luc Godard’s *Breathless* (1960) with its discontinuities, jump cuts and documentary aesthetics as an exemplar of art film. In *Narration and the Fiction Film* he analyses the New Wave director Alain Renais’ *La Guerre est Finie* (1968) in support of his theories regarding avant-garde film. However the film theorist Roy Armes analysis of Resnais’ most complex film *L’annee Derniere a Marienbad* (*Last Year at Marienbad*) (1961) is a more insightful demonstration of the fact that even in an avant-garde film that deliberately sets out to destroy structure, a structure may be decoded.

On first analysis, *Last Year at Marienbad* appears to lack any narrative cohesion in terms of causality or memory – the preferred construct for the apparent random nature of works like *Of Day, Of Night* or films like Resnais' *Hiroshima Mon Amour* (1959). The script is written as a game by its scriptwriter, Alain Robbe-Grillet, one of the key figures of “le nouveau roman”, the French literary movement that set out to destroy the boundaries and constructs of traditional literature. Armes observes:

Game for Robbe-Grillet has come to mean structural freedom, absence of traditional rules of transition, viewpoint, chronology, and other parameters of previous fiction, and, so on the constructive side, an invitation to create new models, to develop new combinations, to push ahead even further the aptly termed nouveau roman (Armes, 1994: 112).

According to Armes, the essential “story” of *Last Year at Marienbad* is that of a stranger X who arrives to remind a woman A (who may or may not be married to a man M) that they may or may not have met a year ago and agreed to go away together. The narrative unravels via a flow of images which reveals the characters playing successive games of Nim, a Chinese card game, as well as an audience viewing a stage play of characters who could be X and A. In his championing of film as drama, Armes (1994: 112) sets out to describe a structure for *Last Year at Marienbad*. He notes that the flow of images in the film is unbroken and that any attempt to break down the action into sequences “must stem from an intuitive search for pattern” (Armes, 1994: 112). For Armes, the pattern is established by the internal structures of the film as created by the music and positioning of segments of the game play. He also observes it may be established by using the successive games of Nim as “breakpoints” (Armes, 1994: 113). It is acknowledged that there is no “correct” reading or structure for *Last Year at Marienbad*. This adheres to the philosophy of practitioners of le nouveau roman like Resnais and Robbe-Grillet who set out to challenge traditional narrative structure and practice. Overall the success of Resnais' film, which was nominated for an Oscar for Best Story and Best Screenplay in 1962, is testimony to the audience's ability to “interact” with films which are more than a linear plot in which is nothing is left unclear or unexplained.

Taking this analysis of *Last Year at Marienbad* into account, it is apparent that even in the most avant-garde, apparently random nature of the work of the French New Wave and the nouveau roman filmmakers and screenwriters who set out to destroy structure, organising structures such as that of the “bookends” of the game of Nim can be perceived. The patterning of these avant-garde narratives is truly complex – much more so than the simple branching pathways or story-shapes of computer games and multiform narratives like *I am a Singer* or *Of Day, Of Night* in the digital domain, or even in the filmic domain in the structuring of narrative as contented by Aronson in her theories of parallel narrative.

In terms of the dramaturgical parameters of this thesis it is possible to see in Bordwell’s characterization of the segments and sequences of avant-garde narrative what one might term an “act” in the classic narrative sense. These “acts” are broad segments of action that build upon certain principles to create a specific emotional response in the audience via the orchestration of the emotions and the juxtaposition of images and sound. What is relevant to note in Bordwell’s discussions of avant-garde narrative form in *Film Art* (2001) and *Narration in the Fiction Film* (1985), is his specific avoidance of the mention of Sergei Eisenstein’s montage theories in relation to the theorizing of the formal nature of both abstract and associational forms. It could be said that this deficit has been addressed in Bordwell’s work in the context of his study of *The Cinema of Eisenstein* (1993) but in this text Bordwell’s focus is on Eisenstein’s life rather than a study of Eisenstein’s montage theories as they contribute to systems of formal functioning. To address this shortfall, the montage theories of Eisenstein were considered in the previous section as the motivator of the avant-garde structures and systems that Bordwell addresses in his work on art cinema. These were noted in terms of the *Poetics of Mosaic Narrative* as the essential key to the creation of avant-garde systems at the point of montage or the *Story Moment*.

In summary and in the context of the work of this thesis, the above discussion of Avant-garde form in cinema is vital to the development of as poetics of new media narrative for a number of reasons. Firstly, drawing from Bordwell’s theory of avant-garde narrative

form, Kratky's concern for a structure of new media narrative as noted in *Soft Cinema*, may be addressed by considering avant-garde cinematic theory. Secondly, the new media narratives that have been considered in this thesis typically evidence aspects of the themes and features of avant-garde narrative, albeit in a somewhat random and unstructured way. For example, both *Mission to Earth* and *Of Day, Of Night* deal with themes of isolation, alienation and existentialism. Both *Texas* and *I am a Singer* deal with the search for identity – in the case of *Texas* it is the variable identity of the city, in the case of *I am a Singer* it is the lost identity of the singer. All of these films employ the techniques of abstraction and association Bordwell notes as being typical of avant-garde film and which Eisenstein addresses in his theories of intellectual montage – the juxtapositions of both complementary and discordant imagery, the attenuated use of sound and the distorted treatment of time and space. Finally, the metaphor of the dreamlike state which Bordwell characterizes as an element of avant-garde form and aesthetics, conceptualises the new media narratives which have been examined in this thesis. Significantly these narratives are characterized by the use of the metaphor of the dream, the wanderer or the flaneur whose memories or dreams appear to be recounted to the audience via a stream of consciousness. In *Mission to Earth* Inge wanders Earth recalling her memories; in *Of Day Of Night*, the female protagonist has forgotten how to dream and must fulfil various tasks before she can learn to dream again; in *I am a Singer* the singer must trawl through scrapbooks of her memories in search of herself.

5.18 New Media Narrative and Avant-garde Form and Structure

Having considered the structural and formal parameters of avant-garde narrative as so ably theorised by Bordwell, a taxonomy of features that characterize key elements of avant-garde cinema sufficient to the goal of creating a set of parameters with which to code new media narrative, may be tabulated. The crucial observation regarding the essential features of these elements and an important parameter of the *Poetics of Mosaic Narrative*, is the emphasis on a Formalist concern with the foregrounding of the device and its role in the creation of both systems of style and abstract or associational structures of meaning via the processes of montage. Although as noted above Bordwell goes to

great lengths to discuss the functioning of style as a formal system, he neglects to relate this to the empowering effects of montage, particularly montage as so dynamically theorized by Eisenstein. In this thesis what could be termed an “avant-garde dramaturgy” of film as integrally created by the cinematic, is being formulated. In this process the unique role of the cinematic in constructing the story or fabula in cinematic new media narrative is being foregrounded. This role includes the following concepts developed from Bordwell’s proposals regarding avant-garde form and conceived of in terms of the dramaturgical structure and formalist cinematic devices central to the *Poetics of Mosaic Narrative*.

Form & Structure

1. Two forms of avant-garde narrative: Abstract form and Associative form.
2. Features of Abstract form: (a) operates on the premise of “theme and variation”, (b) “basic material” introduced in introductory sequence, (c) subsequent sequences with gradually diverging variations and patterning of these relationships, (d) the similarities and differences will not be random - some underlying principle runs through the film.
3. Structural features of Associational form: (a) images are typically grouped together in larger sets to create distinct and unified sections of the film for contrast with other groups of images, (b) repeated motifs are used to reinforce associational connections, (c) open to interpretation, the assigning of general meanings to the film.

Dramaturgy

1. Dramaturgical Causal connections in the fabula are weakened with significant “gaps”.
2. Parallelisms “come to the fore” with “chance” playing a major factor.
3. More emphasis on character than on plot.
4. Character often placed in “boundary” situation or a crisis situation of “existential” significance.

5. Formal centre, which focuses on a situation's existential import, motivates characters' expressing and explaining their mental states.
6. Concerned less with action than reaction, the art cinema presents psychological effects in search of their cause.
7. Characters retard the movement of the syuzhet by telling stories – autobiographical events (especially from childhood), fantasies and even daydreams.
8. Notion of ambiguity pervades art cinema narration - the ambiguous ending and the ambiguity of events in terms of both their meaning and the often-ambiguous motivations and connections between events.

Cinematic devices

1. Character's mental state also usually is complemented by the stylistics of the film with spatio-temporal "expressive effects" coming to the fore.
2. Art cinema range of mise-en-scene cues for expressing character mood: static postures, covert glances, smiles that fade, aimless walks, emotion-filled landscapes, and associated objects.
3. Techniques to enact the processes of the mind utilized: dreams, memories, hallucinations, daydreams, fantasies, and other mental activities can find embodiment in the image or in the sound.
4. Overt narrational "commentary" which is enacted both by the deliberate use of the techniques of film to "highlight" a point by, for example, on the small scale the use of an unusual angle or on the grand scale the authorial trademarks of the auteur (Adapted from Bordwell, 1985: 206-209).

5.19 Coding the New Media Database - Montage, Style and Avant-garde Form

In this final tabulation of the formal, dramatic and cinematic attributes of avant-garde narrative form an example of the potential levels of narrative complexity in the new media environment is contemplated. In this thesis the intricacy of new media narrative construction has been considered in a continuum from the narrative

of a simplistic linear skills based driver video game like *Grand Theft Auto* to a complex avant-garde film like *Meshes of the Afternoon*.

The possibilities for interacting with these stories may exist on any level whether it be the driving in a game, the choosing of a forking pathway, the re-configuring of the story by editing, or the selection from a database by the computer machine - it is not the interaction per se that is important. It is the setting up of the interaction and the decisions that the new media designer must make at a structural and formal level to create the potential for meaningful audience interaction in terms of the dramatic, narrative and cinematic functioning of the devices of visual storytelling as they contribute to the overall story form.

The key factor in creating any potential interaction in an interactive digital medium, is the concept of the database and the encoding of both the potential narrative material - the segmented *Cinematic Narrative Syntagma* – and the algorithm that enacts the story via the operation of what can be regarded as a meta narrative search engine. As has been demonstrated in the *Soft Cinema* project, the search engine software is not specifically designed to produce an aesthetic result or even a narrative result per se. Kratky notes:

The software was used as an associative tool that enabled me to explore a collection of film clips and to arrange them in a coherent way. The machine processed the material without any aesthetic preconception and this allowed for new narrative and aesthetic structures to arise from an initially indiscriminate database. So, while it is in the end an algorithm that tells the *Soft Cinema* display software to show a certain sequence of video clips, the algorithm itself is the result of an authoring process. It is, consequently, only through my creative decision-making – which clips to include in the database, which parameters to select, how to weigh them, and what rhythm in the temporal development to follow that the final film takes on aesthetic qualities (Kratky, 2005: 30).

In the *Soft Cinema* project it would seem that in the absence of concepts that could assist in the authoring process, the machine is given free reign to select the story. The narrative selection process based on the parameters of the association of visual attributes

like “contrast”, “grey scale” and other factors is not conducive to telling a story - whether it be either a classic or an avant-garde narrative. Kratky acknowledges that the search engine’s selection process is enacted by the actual functioning of the algorithm as the result of the new media designer’s “authoring process”. It is evident from the analysis undertaken above that this authoring process has not taken into account the basic precepts of the cinematurgical – the dramatic and cinematic functions of story. In the particular focus of this chapter – the cinematic and the study of this attribute in terms of the cinematic narrative of *Mission to Earth* - this shortfall has been particularly evident. While *Mission to Earth* may be considered an avant-garde narrative which loosely coalesces as a story, there are significant shortcomings that could be better developed with the application of the concepts of cinematic storytelling as outlined in the *Poetics of Mosaic Narrative*. As demonstrated in the discussion of *Meshes of the Afternoon*, *Last Year at Marienbad*, *American Beauty* and *Amores Perros*, it is possible to set up structures that utilize the narrative, dramatic and cinematic techniques classical and avant-garde film form and thus create stories that are dramatically engaging.

An examination of the Story Generator or search engine used in *Soft Cinema* (See Table 5.3 below) reveals that the search parameters for *Mission to Earth* and *Texas* include: “length of clip”, “activity”, “average grey scale”, “contrast”, “dominant motion”, “distance”, “geolocation” and “typelocation”.

Table 5.2 *Soft Cinema* Story Generator

The search parameters used to code the clips contained in the database, as noted by Manovich, afford the potential for clips to be selected in terms of their “similarity” to the parameter nominated in the search engine. These parameters noted above in the *Soft Cinema Story Generator* start to address the elements of *Mosaic Narrative* that have been canvassed in this thesis as part of the cinematurgy of a new media narrative. At the foundational level of the *Digital Narrative Syntagma* as discussed in Chapter 4, the denominator “action” may relate to narrative function if it were to be enriched by being coded with Propp’s narrative functions.

Building on this Syntagma to create the *Cinematic Narrative Syntagma*, the elements of the cinematic that are important at the micro level - mise-en-scene, cinematography and mise-en-scene may be considered. By considering the *Soft Cinema Story Generator* the denominators of greyscale and contrast and may constitute part of the elements of the mise-en-scene and again could be enriched if other elements of mise-en-scene, for example, Eisenstein’s notion of graphics, tone and depth were to be referenced. The denominator of camera distance is essentially descriptive but may contribute to the cinematography. There is no reference to montage or form in the parameters addressed by the Story Generator. However by using the elements of montage and avant-garde narrative form discussed in this chapter these may be considered. For example, if one were to be more specific in the creation of the structure and form of the avant-garde narrative, the selection processes of the Story Generator – the narrative search engine – used to create *Mission to Earth*, could include the following parameters of montage and avant-garde form at the macro level of cinematic function:

Narrative Form:	Avant-garde
Structure:	Associational
Dramaturgy:	Theme and variation (eg Inge wanders, Inge emails etc) Repeated motifs (eg the car wash, empty landscapes etc) Reminiscences (eg childhood on Alpha 1, the boyfriend etc)
Cinematic:	Mise-en-scene (eg use of colour, composition, graphics etc) Cinematography (eg camera motion, framing etc) Montage (eg rhythmic, tonal, intellectual etc)

5.20 Conclusion: Manovich and the *Poetics of Mosaic Narrative*

In this chapter the *Mosaic Narrative* concept of the cinematurgical has been further developed by reference to Manovich's work in *Soft Cinema*. In particular the element of the cinematic as an organizing system for narrative in new media has been elaborated. While the functioning of the cinematic is equally relevant and important for classic three-act narrative structure and form, in this chapter the computer generation of narrative has been contemplated in an interactive digital environment. In this case where a computer search engine may appear to randomly select or generate story material, the focus has been on the storytelling role of the cinematic in more avant-garde narrative forms.

The cinematic may be conceived on a number of levels. These range from the micro relations built up in terms of montage and mise-en-scene within and between shots, to macro form and the systems of style and "acts" of story material activated by the associational processes of montage. In this chapter Eisenstein's theories of montage were scrutinized as a means of contemplating the cinematic at the micro level in terms of the graphical, aesthetic and intellectual processes activated in the process of montage within and between shots. In particular Eisenstein's "Battle on the Ice" sequence was offered as a crystallized example of the orchestration of cinematic montage in the creation of an artistic object. Bordwell's theories of avant-garde narrative were scrutinized as a means of contemplating the cinematic at the macro level by examining the creation of more avant-garde, as opposed to classic narrative structures. The process of montage enacts avant-garde narrative form as it contributes to the creation of large-scale "acts" or movements of narrative material that may be orchestrated to create avant-garde structure and form in a digital environment.

CHAPTER 6: PUTTING RESEARCH INTO PRACTICE: A TABULATED GUIDE TO THE POETICS OF MOSAIC NARRATIVE

6. Introduction

In this chapter the *Poetics of Mosaic Narrative* are tabulated, evaluated and situated in the milieu of new media narrative research and creation. The *Poetics of Mosaic Narrative* does not presume to be a guide about how to write a story but rather a guide about how to conceive of and organize the elements of a cinematic story in a digital medium. In the tradition of Aristotle's *Poetics*, the *Poetics of Mosaic Narrative* is specific in noting the elements of structure and form that comprise a cinematic new media narrative. In the tradition of the Russian Formalist's *Poetika Kino* - in particular Kazansky's notion of the cinematurgical – the *Poetics of Mosaic Narrative* highlights the crucial importance of the dramaturgical and cinematic nature of new media narrative. However unlike the Russian Formalists who question and ponder the role that plot and cinematic style play in the processes of the syuzhet's articulation of the fabula, the *Poetics of Mosaic Narrative* tables these features in a framework that summarizes the attributes and function of the *Cinematic Digital Syntagma*, the *Story Moment* and *Mosaic Narrative* form in new media storytelling.

6. 1 Storytelling and the *Poetics of Mosaic Narrative*

Writers write stories in any number of ways. Sometimes ideas may be sparked by an image, an idea or an anecdote from real life. Sometimes ideas may be the result of detailed and painstaking research. Sometimes a story may take many laborious years to write. Sometimes a story may seem to flow effortlessly from the pen, as if the writer has been touched by the muse. Whatever the impetus, whatever the process, whatever the time it takes to write a story – the writing of a story is a matter of individual talent, craft and art.

In the tradition of the Russian Formalists this thesis has focussed on examining the artistic nature of new media storytelling in the quest to enter “the digital expressive age”

(Davenport, 2004: 162). As noted the Formalist tradition looks at “artistic form as an organizing principle” (Bordwell, 2008: 23) whereby “style and large scale form are mobilized to guide the spectator’s overarching understanding of the material” (Bordwell, 2008: 50). As Bordwell observes: “Poeticians presume that the artwork results from choices within a craft tradition...Craft choices always offer a range of options and the choices made by the artist will be correlated with some purpose – the design of the work or an effect on the perceiver” (Bordwell, 2008: 15).

In computer based new media narrative the dynamic notion of “interactivity” as it involves the perceiver, poses significant design problems for traditional models of narrative and form. Whether the notion of interactivity implies that a computer generates a different narrative each time the database is accessed as in Manovich’s *Mission to Earth*; whether it implies that the audience has some form of significant interaction with the story in the role play of an interactive drama like Mateas’ *Façade*; whether it offers the opportunity to choose a different story pathway in a new media interactive drama like *Of Day, Of Night*; whether it offers the skills and goal-directed agency of a computer game like *Grand Theft Auto: Miami Vice*; or whether it offers the dramatic engagement of a web-cam drama like *Online Caroline*; the new media designer must specify the discrete elements of the cinematic story hosted in the computer database and anticipate how they may be “interacted with”. By using the poetic tools of Structuralism and Formalism discussed in this thesis and employing narrative and cinematic elements of storytelling, for example, causality, the sequential rendering of story time and space in chronological time, the principles of montage, the use of the classic three-act structure, the techniques of avant-garde narration and the use of, for example, metaphorical elements of the *mise-en-scene*; the elements of the database may be conceptualised and coded.

The framework below provides a scenario whereby a variety of questions may be asked and answered by the designer as they create and anticipate the interactive possibilities of a new media narrative which is rendered in a *Mosaic Narrative* form.

6.3 A Guide to Reading the *Mosaic Narrative* Framework

The table may be read via levels from top to bottom or via columns from left to right at each or any step of the creative process. Not every question posed during the creation of a new media *Mosaic Narrative* needs to take into account all the elements of the framework. Sometimes the use of just one or two elements may prove fruitful.

Reading from top to bottom provides the designer with a way of conceptualising how a fragment of story material may eventually play a part in the completed story mosaic. At the first level, the *Digital Narrative Syntagma* the designer conceives of the basic narrative fragment or function. At the second level, the *Cinematic Digital Syntagma*, which supersedes the *Digital Narrative Syntagma*, the designer conceptualises the cinematic and dramaturgical properties of the narrative fragment. At the third level, the *Story Moment*, the designer thinks about the effects that the linking of the *Cinematic Digital Syntagma* or potential audience interaction may have in terms of the basic type of *Mosaic Narrative* form they are creating. At the fourth level the designer conceptualises all of the potential features of the *Mosaic Narrative* form which in itself may contain elements of classic narrative, parallel narrative or avant-garde narrative structure and form.

Reading from left to right provides the designer with a way of checking the structural and formal attributes of the segment for each part of the storytelling process. In columns two and three the relevant narrative or cinematic theory discussed in this thesis, the theorist, and a brief list of key features of the theory is noted as a reference for this process. The fourth column provides a summary prose description, or check, of the attributes of the mosaic fragment based on the information from columns one to three.

As an example of using the framework, the designer could use the following steps in the creation of a *Mosaic Narrative*. To start the designer commences at the mosaic fragment in column one on the left.

Step 1. At the level of the *Digital Narrative Syntagma* the designer may think about the story attributes of the fragment by reading across the table from left to right. The attributes of the fragment at this stage may include its basic narrative function described in terms of Propp's functions and the fact that it has certain "digital" features because it is a database narrative. Additionally it is part of the syuzhet so it has certain formal functions depending on its elemental *Mosaic Narrative* form and structure.

Steps 2 and 3. At the level of the *Cinematic Digital Syntagma* the new media designer may think about the dramaturgical and cinematic properties of the story fragment. If the designer chooses to use a classic or parallel narrative structure, these features will usually be conceived of in terms of the three act dramatic structure and may involve, for example, decisions about temporal and spatial ordering using Metz's *Grande Syntagmatique*. The *Cinematic Digital Syntagma's* formal function may also be described in terms of its dramatic importance, for example, whether it is the climax or exposition as developed in terms of Aronson's Smiley/Thompson Model. Its formal function also affects cinematic decisions about the creation of systems of style via montage, cinematography and mise-en-scene. If the designer chooses to create a more avant-garde narrative, he or she may focus more on the stylistic links made by montage at the *Story Moment*. These include the methods of creating both abstract and associational film form either by using Eisenstein's Soviet Montage theory or Bordwell's Avant-Garde film theory. For example, at the micro level links may be made by graphical, rhythmic or associational means working to build facets of the macro form which may involve the creation of parallelisms, ambiguity or metaphor as tabulated at level four of the table.

Step 4. At the level of final form, the completed *Mosaic Narrative*, the new media designer has established the underlying structural and formal elements of the *Mosaic Narrative*. As noted this process is not necessarily one that progresses in a scenario that sees the designer working from the top to the bottom of the table. However no matter what their creative process, with the *Poetics of Mosaic Narrative* the new media designer has at their behest a system with which to code the narrative search engine in the selection and creation of an interactive new media narrative.

CHAPTER 7: CONCLUSION: THE POETICS OF MOSAIC NARRATIVE

7.1 NEW MEDIA STORYTELLING

The fascination of new media narrative research is with the potential for interactivity - whether it be in terms of the shooting or driving of a computer game, the standing in a virtual world, the responding to the “call to action” of an iTV show, or the fabrication of an imagined alternate life in an on-line game. This potential has been enabled by the digital configuration of the story and the machine.

In time the technology of cinema – celluloid and the film projector - may give way to the digital. However at the moment, as Lev Manovich asserts, the two art forms are inextricably linked. Storytelling in new media is cinematic in appearance, digital in its material and machine-enabled in its articulation.

During the process of research for this thesis, two previously inconceivable media for storytelling have been actualised – the convergence of the computer and the television screen in the home based Windows Media Centre and the convergence of the computer, the web and the mobile phone in storytelling via the mobile phone. There is no doubt that the technology will keep improving and provide even more impressive examples of the convergence of storytelling technologies. In particular the innovative work of MIT’s Interactive Cinema Group, Carnegie Mellon University’s School of Computer Science, Australia’s *iCinema* and Lev Manovich may become more mainstream as computer-based storytelling further develops as an interactive art form.

However the research of this thesis has not been about interactivity per se, but more so about the implications of creating interaction in the process of cinematic new media storytelling. If the new media designer were to become au fait with the tools of cinematic storytelling, then he or she would be able to understand how to dramatically and cinematically encourage the audience to interact, if that is the imperative. If a storyteller can create a good story the audience will want to become involved with it.

“How to conceptualise a new media object in which interaction is engendered?” has been the question that has occupied the foremost researchers in the area – Lev Manovich, Janet Murray, Brenda Laurel, Glorianna Davenport, Jeffery Shaw and Megan Heyward. They all note that they are still “on the road” to the answer.

7.2 THE RESEARCH JOURNEY

The original title of this thesis also saw the research for ways to tell story in new media in terms of the metaphor of the road – in this case the poet Robert Frost’s quintessential “The Road Not Taken”. As well as representing the challenge of the unknown, the road metaphor represented what I knew of new media narrative as gleaned from my experience of my children’s video games – the clicking on those endless pathways of story material that seemed to go nowhere. The more I researched new media narrative the more I learnt that the analogy was true – the branching tree metaphor, as well as being a recognised structure for new media storytelling, was also an apt image for the many diverging roads of research one may follow in the wood of uncharted trees that is the theory and practice of new media narrative.

However as I built an hypothesis for new media narrative and the intersection of film and narrative theory, the more I found that the road analogy was inappropriate. It was obvious that the new media narrative forms of the database, macro cinema and virtual reality were exciting innovations but the stories they told seemed to lead nowhere. They certainly did not engender the “pity or thrill” of Aristotle’s dramatic poetry.

The road metaphor was not apt. Where was the way to describe how the visual elements of the cinema fitted together in a new media narrative? How could a digital story be more than the linearity of the language journey, the dramaturgy of the hills and vales of the rising three-act structure, the cocoon of the holodeck or the multiple windows of macro cinema? How could the wonderful musical orchestration of Eisenstein’s “Battle on the Ice” sequence form part of the canon of new media narrative theory? Indeed how could all these images be encapsulated in one “meta image”? Murray theorized the virtual world of the mesmerising and alluring “holodeck”. Davenport posited the weaving of new media stories as fabric media... I thought I had found the answer in the work of the

classic film theorist Bela Balzas (1948) who saw the interrelationship of new content and new form as the river and the riverbed - where the river, the content, would ultimately shape the form, the riverbed (Balzas, 1948: 256-257). Unfortunately there was still the fact that the river analogy was too linear for my purposes.

All these metaphors fell short when describing the situation where the story content and structure and cinematic form are so closely interrelated. Bordwell elegantly theorizes the operation of systems of form and style in *Film Art* (2001) but he resists the logistics of Structuralism. The Russian Formalists proposed an insightful poetics in *Poetika Kino* (1927) which in the final analysis really posed more questions than it answered. But what great questions they were. They also left an important legacy. By conceiving of storytelling in terms of the fabula and the syuzhet, they provided a means of considering the way in which man and machine may work together in the telling of digital stories.

But none of these theories seemed to suit the multi-faceted nature of digital storytelling where fragments of story material are fractured between creators, medium and audience. None addressed the reason why we are drawn to stories in the first place. None considered what makes a cinematic story a work of art that encourages and rewards engagement and promotes the interactivity that is regarded as one of the greatest advancements of new media storytelling.

During the period of my research I was making mosaics. It dawned on me that the process was much the same - choosing fragments that linked together, incrementally creating larger sections with the aim that they would all combine in a harmony of structure and aesthetics, that would create the overall form of a mosaic. So the new title - *Mosaic Narrative* seemed apt. It would seem that no one else has coined this term for a theory of cinematic storytelling in new media.

As I became increasingly aware of the work of the Russian Formalists, I found that Kazansky had also conceived of cinematic storytelling as a mosaic. However it quickly became evident that like his Russian Formalist collaborators in *Poetika Kino*, he had merely posed the question of "How to create this mosaic?" My research revealed that the Russian Formalists had left us an important legacy – a legacy undeveloped for nearly a

century – the dual idea of story as driven by plot and structure and story as driven by style and form. While the Structuralists of film theory had done much to develop theories of the importance of plot structure; while the dramatists of theatre and the scriptwriting theorists of film had done much to develop Aristotelian theory and the practice of film as drama; while the Neo-Formalists had done much to develop the theory of film as art; no theorist had considered how all these vital elements of cinematic storytelling fitted together. It was only in the conceptual work of the Russian Formalists and their *Poetika Kino*, that the fragments had been considered as integral and organic to the art of cinema.

This thesis is my poetics. It is a re-contextualization and development of Formalist cinematic theory offered as an answer to the quest to apply the craft of visual storytelling to the digital arena. Whether one is creating interactive television, a computer game, net art or a digital installation; whether the computer is driven by the algorithmic behaviour of the computer game, or the search engine of the computer database of the interactive cinema scenario of the university research lab, or digital installation; or whether it is in the more hard-wired environment of contemporary commercial interactive television – an interactive narrative – what may be regarded as an object of mimetic representation in Aristotelian terms, may be conceived of as a mosaic.

As the storyteller, whether the creator or designer, who has been the focus of this thesis, or the audience, creates this mosaic, they are mindful of the overall form – the completed cinematic story. Each piece of the mosaic has a texture – a narrative function, a structural role, stylistic attributes, and a place to play as it contributes to the finished form. As one fragment of the mosaic - the *Cinematic Narrative Syntagma* - is placed beside another fragment, it gains a narrative, temporal, spatial and stylistic dimension that activates the processes of montage at the *Story Moment*. Whether the overall form is the carefully orchestrated Aristotelian three-act drama, the intricate web of Aronson's parallel narrative, the spiralling narrative of Deren's experimental film, the branching journey of Heyward's interactive narratives, or the Surrealistically fractured avant-garde film of the French New Wave, it still has a form that may be conceived of by the artist as a mosaic.

At the time that the storyteller goes to place the next fragment of mosaic - whether it be the artist or the audience or the machine - the multi-fold processes involved in the *Poetics of Mosaic Narrative* need come into question before there can be an answer to the perennial story question: "What comes next?"

REFERENCES

- Aarseth, Espen, J. (1997) *Cybertext: Perspectives on Ergodic Literature*, Baltimore: The John Hopkins University Press.
- Aarseth, Espen (2004) "Quest Games as Post Narrative Discourse" in Ryan, Marie-Laure (Ed) (2004) *Narrative across Media: the Languages of Storytelling*, Lincoln: The University of Nebraska Press.
- Allen, Robert, C. (ed) (1992) *Channels of Discourse, Reassembled*, (2nd edition) London: Routledge
- Aristotle, *Poetics* (translated by Butcher, S.H.) <http://classics.mit.edu/Aristotle/poetics.mb.txt>
(All references to the *Poetics* are from this text).
- Armes, Roy (1994) *Action and Image* Manchester: Manchester University Press.
- Arnheim, Rudolf (1958) *Film as Art* London: Faber and Faber Ltd.
- Aronson, Linda (2000a) *Scriptwriting Updated - New and Conventional Ways of Writing for the Screen*, Sydney: Australian Film Television and Radio School.
- Aronson, Linda (2000b) *Television Writing: The Ground Rules of Series, Serials and Sitcoms*, Sydney: Australian Film Television and Radio School.
- Balazs, Bela (1948) *Theory of the Film: Character and Growth of a New Art*, trans. Edith Bone (1952), London: Dennis Dobson Ltd.
- Ball, Cheryl, E. (2005) *A New Media Reading Strategy* (PhD Dissertation) Michigan: Michigan Technological University.
- Barthes, Roland (1977) *Image Music Text* (translated by Stephen Heath) Glasgow: Fontana Press.
- Bazin, Andre (1971) *What is Cinema?* (translated by Hugh Gray) Berkley: University of California Press.
- Bazin, Andre (1967) "The Myth of Total Cinema" in Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.
- Bordwell, David (1979) "Art Cinema as a mode of film practice" *Film Criticism* vol. 4 no.I.
- Bordwell, David (1985) *Narration and the Fiction Film*, Wisconsin: The University of Wisconsin Press.

- Bordwell, David (1986) "Classical Hollywood Cinema: Narrational Principles and Procedures" in Rosen, Phillip (Ed) (1986) *Narrative, Apparatus, Ideology: A Film Theory Reader*, New York: Columbia University Press.
- Bordwell, David (1989a) *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema*, Cambridge, Massachusetts: Harvard University Press.
- Bordwell, David (1989b) "Historical Poetics of Cinema" in Palmer, R. Barton (ed.) *The Cinematic Text: Methods and Approaches*, New York: AMS Press (pp 56-61) also at http://www.geocities.com/david_bordwell/historiacalpoet.html
- Bordwell, David (1993) *The Cinema of Eisenstein*, Cambridge Massachusetts: Harvard University Press.
- Bordwell, David and Thompson, Kristin (1997) *Film Art: An Introduction*, 5th edition, New York: McGraw Hill.
- Bordwell, David and Thompson, Kristin (2001) *Film Art: An Introduction*, 6th edition, New York: McGraw Hill.
- Bordwell, David (2002) "Cognitive Film Theory"
@http://www.geocities.com/david_Bordwell/cognitive.htm. (Accessed 24/04/02).
- Bordwell, David (2004) "Neo-Structuralist Narratology and the Functions of Filmic Storytelling" in Ryan, Marie-Laure (Ed) (2004) *Narrative across media: the languages of storytelling*, Lincoln: The University of Nebraska Press.
- Bordwell, David (2008) *Poetics of Cinema*, New York: Routledge
- Branigan, Edward (1992) *Narrative Comprehension and Film*, London: Routledge.
- Brooks, Kevin (1999) *Metalinear Cinematic Narrative: Theory, Process and Tools*, PhD Diss., Massachusetts Institute of Technology Media Lab, Cambridge, Massachusetts.
- Brown, Neil; Del Favero, Dennis; Shaw, Jeffrey and Weibel, Peter "Interactive Narrative as a Multi-temporal Agency" iCinema Centre for Interactive Cinema Research at http://icinema.cofa.unsw.edu.au/pdf/interactive_narrative.pdf Accessed 14 January 2008. Also at Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, MIT Press: Massachusetts.
- Butler, Jeremy, G. (2002) "The Internet and the World Wide Web" in Harries, Dan (Ed) (2002) *The New Media Book*, London: British Film Institute.
- Calvino, Italo (1986) *The Uses of Literature* (Trans. Patrick Creagh) New York: Harcourt, Brace, Jovanovich.
- Campbell, Joseph (1972) *The Hero with a Thousand Faces*, Princeton: Princeton University Press.

Chatman, S. (1978) *Story and Discourse: Narrative Structure in Fiction and Film*, Ithaca and London: Cornell University Press.

Comolli, Jean-Louis (1980) "Machines of the Visible" in Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.

Cook, David A. (1981) *A History of Narrative Film*, New York: W.W. Norton & Company.

Cubitt, Sean (2002) "Spreadsheets, Sitemaps and Search Engines: Why Narrative is Marginal to Multimedia and Networked Communication" in Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Davenport, Glorianna (1996) "Electronic Story Nights: Interactivity and the Language of Storytelling," Australian Film Commission, *Language of Interactivity Conference*, Summer, 1996.

Davenport, Glorianna and Murtagh, M (1997a) "Automatist Storyteller Systems and the Shifting Sands of Story". IBM Systems Journal, vol 36, no3, pp446- 456 November 1999 also at <http://ic.media.mit.edu/pubs/journal/AutomatistIBM.pdf> (Accessed 1/ 11/ 07).

Glorianna Davenport and Brian Bradley (1997b) "Everyone's Cinema: Towards the Future of Cinematics" "Paper at Oberhausen Film Festival - April 28, 1997 @<http://mf.media.mit.edu/pubs/conference/EveryonesCinema.pdf>. Accessed 26/3/2001.

Davenport, Glorianna ; Pan, Pengkai; Woods, Alison (2002)"Mobile Context Sensitive Cinematic Narratives" at <http://mf.medi.mitedu/pubs/journal/MobileCSNar.pdf> . Accessed 14/04/05)

Davenport, Glorianna (2003) "Improvisational Media Fabrics: Take One" in Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, Cambridge, Massachusetts: MIT Press. Also at <http://mf.media.mit.edu/pubs/other/MediaFabricTake1.pdf>

Davenport, Glorianna, Barry, B., Kelliher, A., and Nemirovsky, P. (2004) "Media Fabric – a process-oriented approach to media creation and exchange" in *BT Technology Journal*, Vol 22 No 4. October 2004.

Davenport Glorianna and Mazalek, Ali (2005) "Dynamics of Creativity and Technological Innovation". (Accessed 8/7/05).

Department of Communications, Information Technology and the Arts (DCITA)(2004- 2006) *Australia's Strategic Framework for the Information Economy 2004-2006*, at <http://www2.dcita.gov.au/1e/framework>. (Accessed 2/12/04).

Del Favero, Dennis; Brown, Neil; Shaw, Jeffrey and Weibel, Peter (2005) "T_Visionarium: the aesthetic transcription of televisual databases" in Frohne, Ursula and Schieren (Eds) (2005) *Present, Continuous, Past*, New York: Springer. Also at http://www.icinema.unsw.edu.au/projects/pub_tvvis.html

Deren, Maya “Cinematography: The Creative Use of Reality” in Braudy, Leo and Cohen, Marshall (eds) (1999) *Film Theory and Criticism*, New York: Oxford University Press.

Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications.

Eichenbaum, Boris (1926, 1927) “The Theory of the Formal Method” in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press. (Eichenbaum’s “The Theory of the Formal Method” was first published in Ukrainian in 1926. The text used here is Lemon and Lee’s English translation from the Russian text as published in *Literatura: Teoriya, kritika, polemika* [1927] Leningrad. However all references to “The Theory of the Formal Method” in this thesis note the original year of publication, 1926, to distinguish this essay from Eichenbaum’s “Problems of Cine-Stylistics” published in *Poetika Kino* [1927]).

Eichenbaum, Boris (ed) (1927) *Poetika Kino* trans by Taylor, Richard (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications. (This is the first complete English translation of *Poetika Kino*).

Eichenbaum, Boris (1927) “Problems of Cine-Stylistics” in Eagle, Herbert (Ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications. All references in this thesis are to the Eagle translation.

Eisenstein, Sergei (1949) *Film Form*, New York: Harcourt, Brace and Co. This includes the essays, “The Cinematographic Principle and the Ideogram”(1929a) “The Filmic Fourth Dimension” (1929b), “A Dialectic Approach to Film Form” (1929c) “Methods of Montage”(1929d) and “The Structure of a Film (1929e).

Eisenstein, Sergei, *The Film Sense* (Ed Jay Leyda) (1975) San Diego: Harcourt, Brace & Company.

Egri, Lajos (1946) *The Art of Dramatic Writing*, New York: Simon and Schuster.

Engeli, Maia (c2000) *Digital Stories: the Poetics of Communication*, Basel, Boston: Birkhauser.

Everett, Anna & Caldwell, John, T (Eds) (2003) *New Media: Theories and Practices of Digitextuality*, New York: Routledge.

Fat Cow Motel (2003), Hoodlum Entertainment, Austar, ABC (Unreleased. Episode screened at *National Screenwriters Conference*, Hepburn Springs, Victoria, 12-14 July 2002) Also 13 part series screened by ABC (2003).

Field, Syd (1994) *Screenplay - The Foundations of Screen Writing 3rd Edition*, New York: Dell Trade Paperback, New York.

- Forster, E. M. (1955), *Aspects of the Novel*. New York: Harcourt, Brace, Jovanovich.
- Gianetti, Louis (1982) *Understanding Movies 3rd Edition*, New Jersey: Prentice-Hall, Inc.
- Halliwell, Stephen (1986) *Aristotle's Poetics*, Chapel Hill: The University of North Carolina Press.
- Harries, Dan (2002) *The New Media Book*, London: British Film Institute.
- Herman, David (Ed) (1999) *Narratologies: New Perspectives on Narrative Analysis*, Ohio: Ohio State University Press.
- Heyward, Megan (2002) *Cyberwrite Now*, Address to Australian Writers Guild Workshop 23-24 February, 2002, Sydney, Australia
- Heyward, M. (1997) *I Am a Singer*, Sydney: University of Technology.
- Heyward, M. (2002) *Of Day, Of Night*, Sydney: University of Technology. (*Of Day, Of Night* was initially self published. It has since been published [2008] by Eastgate Systems).
- Heyward, Megan, 25 February 2002, Interview with Margaret McVeigh, Sydney: Sydney University of Technology.
- Heyward, Megan (c2000) online interview at www.storycentre.org/diner/pages/mh4.html. (Accessed 4/6/07).
- Homer (c1000 BC) *The Odyssey* (translated by Rieu, D.C.H. (2003) London: Penguin Books.
- Houghton, Andrew (1994) *Writing the Character Centred Screenplay*, Berkeley: University of California Press.
- Hutchinson, Andrew (2003) "Analysing the Performance of Interactive Narrative", 5th *International Digital Arts and Culture Conference*, Melbourne: RMIT University.
- Interactive Cinema Group, MIT Media Lab (www.ic.mit.edu.au) also known as Media Fabric Group.
- Jacka, Marion (2001) *Broadband Media in Australia*, Sydney: Australian Film Commission.
- Jacka, Elizabeth (1997) "Film" in Cunningham, Stuart and Turner, Graeme (Eds) (1997) *The Media in Australia 2nd Edition*, xxx: Allen & Unwin.
- Jackson, Sally "Interactive domination beats FTA" *The Australian* November 27-December 3, 2003.
- Jakobson, R. (1933) "Is the Cinema in Decline?" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications.

Jameson, Fredric (1974) *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism*, Princeton, N.J: Princeton University Press.

Jenkins, Henry ((2004) “The Work of Theory in the Age of Digital Transformation” in Miller, Toby and Stam, Robert (Eds) (2004) *A Companion to Film Theory*, MA USA: Blackwell Publishing.

Kazansky, B. (1927) “The Nature of Cinema” in Eagle, Herbert (Ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbour: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Kinder, Marsha (2002) “Narrative Equivocations between movies and games” in Harries, Dan (2002) *The New Media Book*, London: British Film Institute.

Kuleshov, Lev (1974) *Lev Kuleshov on Film; Writings of Lev Kuleshov* (translated and edited by Ronald Levaco) Berkeley: University of California Press.

Landow, George P. (1992, 1997) *Hypertext 2.0 The Convergence of Contemporary Critical Theory and Technology*, Baltimore: The John Hopkins University Press.

Landow, George P. (Ed) (1994) *Hypertext Theory*, Baltimore: The John Hopkins University Press.

Laurel, Brenda (1993) *Computers as Theatre*, Massachusetts, Addison Wesley.

Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.

Piotrovshy, A. (1927) “Towards a Theory of Film Genres” in Eagle, Herbert (Ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbour: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Lunenfeld, Peter (2004) “The Myths of Interactive Cinema” in Ryan, Marie-Laure (Ed) (2004) *Narrative Across Media: the Languages of Storytelling*, Lincoln: The University of Nebraska Press also in Harries, Dan (Ed) (2002) *The New Media Book*, London: British Film Institute.

McKee, Robert (1998) *Story, Substance, Structure, Style and the Principles of Screenwriting*, London: Methuen.

McKee, Robert (2003) *The Art Film*, Seminar, 26 February, 2003, the Valhalla Cinema, Sydney. Australia.

Malcolm, Ian (2002) “Scripting Game Cinematics - Theory, processes, practicalities and pitfalls of designing and writing cinematic sequences/in game dialogue” Unpublished paper, National Screen Writers Conference, Hepburn Springs, Vic, 12-14 July.

Manovich, Lev (1994-1997) *Little Movies: Prolegeomena for Digital Cinema* at <http://www.manovich.net/little-movies/enter.html>

Manovich, Lev (1999) *What is Digital Cinema?* In Lunenfeld, Peter (Ed) *The Digital Dialectic: New Essays on New Media*, Cambridge, Massachusetts: The MIT Press.

Manovich, Lev (2001) *The Language of New Media*, Cambridge, Massachusetts: The MIT Press.

Manovich, Lev (2003) Interview with Margaret McVeigh, COFA, Sydney, April 8, 2003.

Manovich, Lev and Kratky, Andreas (2005) *Soft Cinema: Navigating the database*, (DVD video and accompanying booklet) Cambridge, Massachusetts: The MIT Press.
(Also at http://www.manovich.net/cinema_future/toc.htm and <http://www.softcinema.net/form.htm>)

Mateas, Michael (2001) “A Preliminary Poetics for Interactive Drama and Games” SIGGRAPH Conference, LA, 12-17 August 2001 (Art and Culture paper).

Mateas, Michael (2002) *Interactive Drama, Art and Artificial Intelligence*, PhD dissertation Pittsburgh: School of Computer Science, Computer Science Department, Carnegie Mellon University

Mateas, Michael and Stern, Andrew (2005a) “Build It to Understand It: Ludology Meets Narratology in Game Design Space”, Proceedings of DiGRA (2005) Conference: *Changing Views – Worlds in Play*.

Mateas, Michael and Stern, Andrew (2005b) “Structuring Content in the *Façade* Interactive Drama Architecture” American Association for Artificial Intelligence (www.aaai.org) accessed 14/8/07.

Matthews, Kate (2007) “Running in Circles: Run Lola Run” in *Screen Education*, Issue 45 Autumn, 2007.

Metz, Christian (1974) *Film Language A Semiotics of the Cinema*, New York: Oxford University Press.

Mikhailov, E. and Moskvina, A. (1927) “The Cameraman’s Part in Making a Film” in Eagle, Herbert (Ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Miller, Carolyn, Handler (2004) *Digital Storytelling: a Creator’s Guide to Interactive Entertainment*, Oxford: Focal Press.

MIT Media Lab Europe home page @ <http://medialabeurope.org/research/group.php?id=9>.

Monaco, James (1981) *How to Read a Film: The Art, Technology, Language, History, and Theory of Film and Media*, New York: Oxford University Press.

Morrison, Mark (2002) "Turning Words into Games" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.

Mueller, Kathy (2002) "Genre, Gameplay and Platforms" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.

Murray, Janet H. (1997) *Hamlet on the Holodeck - The Future of Narrative in Cyberspace*, New York: The Free Press.

National Institute of Dramatic Art and Australian Film, Television and Radio School. *Love Cuts* @ (www.lovecuts.nida.edu.au). (Accessed 12/4/ 04)

Orwell, George (1949, 1974) *1984*, London: Penguin Books in association with Secker & Warburg.

O'Sullivan, Tim; Hartley, John; Saunders, Danny, Montgomery, Martin and Fiske, John (1994) *Key Concepts in Communication and Cultural Studies*, London and New York: Routledge.

Oz Group, Carnegie Mellon University (www.cs.xmu.edu/project/oz)

Piotrovsky, A (1927) "Toward a Theory of Cine-Genres" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications.

Pledger, David and Shaw, Jeffrey (2004) *Eavesdrop*, Digital Installation at Queensland University of Technology, Kelvin Grove Campus, September 2004

Porter, Michael, J., Larson, Deborah, L., Harthcock, Alison and Nellis, Kelly Berg (2002) "Re(de)fining Narrative Events: Examining Television Narrative Structure" *Journal of Popular Film and Television*, Volume 30 No.1 Spring 2002.

Propp, Vladimir (1968) *Morphology of the Folktale*, 2nd edition, (1st edition translated by Scott, Laurence, 2nd edition revised and edited by Wagner, Louis, A.) Austin: University of Texas Press.

Propp, Vladimir (1984) *Theory and History of Folklore*, (translated by Martin, Ariadna Y. and Martin, Richard P.) Manchester: Manchester University Press.

Red Ant Enterprises, (1993) *Myst*, The Learning Company.

Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Robertson, Tracey and Mayfield, Nathan (2002) "Interactive Television Case Study - Fat Cow Motel" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.

Rockstar Games (2003) *Grand Theft Auto: Vice City*, Rockstar Games

Ryan, Marie-Laure (Ed) (2004) *Narrative across media: the languages of storytelling*, Lincoln: The University of Nebraska Press.

Ryan, Marie-Laure (2001) *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*, Baltimore: John Hopkins University Press.

Sarris, Andrew (1985) *The American Cinema: Directors and Directions 1929-1968*, Chicago: University of Chicago Press. First published 1968.

Seger, Linda (1994) *Making a Good Script Great*, Hollywood: Samuel French.

Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, Cambridge, Massachusetts: MIT Press.

Shklovsky, Victor (1917) "Art as Technique" in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.

Shklovsky, Victor (1921) "Sterne's *Tristram Shandy*: Stylistic Commentary" in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.

Shklovsky, Victor (1927) "Poetry and Prose in the Cinema" in Taylor, Richard (Ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Shoup, Barbara, and Denman, Margaret Love (2001) *Novel Ideas: Contemporary Authors Share the Creative Process*, Indianapolis: Alpha Books.

Smiley, Sam (1971) *The Structure of Action*, New Jersey: Prentice Hall Inc.

Smith, Susan (2000) *Hitchcock: Suspense, Humour and Tone*, London: British Film Institute.

Stam, Robert; Burgoyne, Robert; FlitterMan-Lewis, Sandy (1992) *New Vocabularies in Film Semiotics Structuralism, Post Structuralism and beyond*, London and New York: Routledge.

Stam, Robert (2000) *Film Theory An Introduction*, Massachusetts: Blackwell.

Szilas, Nicolas, Marty, Olivier and Rety, Jean-Hugues (2003) "Authoring Highly Generative Interactive Drama", *Virtual Storytelling :Using Virtual Reality Technologies for Storytelling*, Second International Conference, IVCS 2003 Toulouse, France, November 2003, Germany: Springer.

Thompson, Kristin (1988) *Breaking the Glass Armor: Neoformalist Film Analysis*, New Jersey: Princeton University Press.

Tomashevsky, Boris (1925) "Thematics" in Lemon, Lee T. and Reis, Marion, J. (Ed and trans) (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.

Tynjanov, Yuri (1927) "The Fundamentals of Cinema" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. (All references are to the Eagle translation).. Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.

Vogler, Christopher, (1998) *The Writer's Journey: Mythic Structure for Writers*, Studio City, CA: M. Wiese Productions.

Walker, Jill (2004) "How I was played by Online Caroline"
(<http://jilltxt.net/txt/onlinecaroline.html>). (Accessed March 18, 2005).

Willemen, Paul (2002) "Reflections on Digital Imagery: Of Mice and Men" in Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Wollen, Peter (1998) *Signs and Meaning in the Cinema*, London: British Film Institute.

Wood, Catherine (2006) Sometimes you need the help of the Universe: *Run Lola Run*" in *Screen Education*, Issue 42 Autumn, 2006.

FILMOGRAPHY

All About My Mother (1999)

American Beauty (1999)

Amores Perros (2000)

Ballet Mecanique (1924)

The Big Chill (1983)

Body Heat (1981)

The Cabinet of Dr Caligari (1920)

Un Chien Andalou (1929)

Citizen Kane (1941)

Hiroshima Mon Amour (1959)

Lantana (2001)

Magnolia (1999)

Meshes of the Afternoon (1943)

Moulin Rouge (2001)

Night and Fog (1955)

Pulp Fiction (1994)

Memento (2000)

Raise The Red Lantern (1991)

Rashomon (1950)

Run Lola Run (1999)

Sliding Doors (1999)

Timecode (2000)

BIBLIOGRAPHY

- Aarseth, Espen, J. (1997) *Cybertext: Perspectives on Ergodic Literature*, Baltimore: The John Hopkins University Press.
- Aarseth, Espen (2004) "Quest Games as Post Narrative Discourse" in Ryan, Marie-Laure (Ed) (2004) *Narrative across Media: the Languages of Storytelling*, Lincoln: The University of Nebraska Press.
- Allen, Richard (1995) *Projecting Illusion Film Spectatorship and the Impression of Reality*, Cambridge and UK: Cambridge University Press.
- Allen, Robert, C. (Ed) (1992) *Channels of Discourse, Reassembled*, (2nd edition) London: Routledge
- Australian Film Commission (2002) *Broadband Production Initiative Funding Guidelines, June 2002*, Sydney: Australian Film Commission.
- Australian Film Commission & Australian Film Television & Radio School (1993) *The Filmmaker and Multimedia Selected Conference Papers: October 1993*, Sydney: Australian Film Commission.
- Australian Film Television and Radio School and South Australian Film Commission (2005) *LAMP Cross Platform Development Seminar and Orientation Workshop*, 31 August, 2005, Brisbane.
- Andrew, Dudley (1976) *The Major Film Theories: An Introduction*, London: Oxford University Press.
- Aristotle, *Poetics* (translated by Apostle, H.G., Dobbs, E. and Parslow, M.) Grinnell, Iowa: The Peripatetic Press, 1990.
- Aristotle, *Poetics* (translated by Butcher, S.H.) <http://classics.mit.edu/Aristotle/poetics.mb.txt>
(All references to the *Poetics* are from this text).
- Armes, Roy (1994) *Action and Image*, Manchester: Manchester University Press.
- Arnheim, Rudolf (1958) *Film as Art*, London: Faber and Faber Ltd.
- Aronson, Linda (2000) *Scriptwriting Updated - New and Conventional Ways of Writing for the Screen*, Sydney: Australian Film Television and Radio School.
- Aronson, Linda (2000b) *Television Writing: The Ground Rules of Series, Serials and Sitcoms*, Sydney: Australian Film Television and Radio School.
- Balazs, Bela (1948) *Theory of the Film: Character and Growth of a New Art*, trans. Edith Bone (1952), London: Dennis Dobson Ltd.

Balet, Olivier, Subsol, Gerard and Torguet, Patrice (Eds.) (2003) *Virtual Storytelling: Using Virtual Reality Technologies for Storytelling*, Second International Conference, IVCS 2003 Toulouse, France, November 2003, Berlin: Springer.

Ball, Cheryl, E. (2005) *A New Media Reading Strategy* (PhD Dissertation) Michigan: Michigan Technological University.

Barber, Lynden (2003) "Edge of Reality. It's not science fiction. The future of film is digital and it's almost here," *The Weekend Australian*, January 11-12, 2003.

Barthes, Roland (1977) *Image Music Text* (translated by Stephen Heath) Glasgow: Fontana Press.

Barrett, Edward and Redmond Marie (Eds) (1995) *Contextual Media: Multimedia and Interpretation*, Massachusetts: Massachusetts Institute of Technology.

Bazin, Andre (1971) *What is Cinema?* (translated by Hugh Gray) Berkley: University of California Press.

Bazin, Andre (1967) "The Myth of Total Cinema" in Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.

Baxter, John "Actors Who Lost the Plot," *The Australian* March 15-16, 1997.

Belifore, Elizabeth (2000) "Narratological Plots and Aristotle's Mythos", *Arethusa* 33.1 (2000) 37-70
(<http://muse.jhu.edu.ezp01.library.qut.edu.au/journals/arethusa/v033/33lbelfiore.html>).
(Accessed 7/8/06)

Berger, Arthur, Asa (2000) *Media and Communication Research Methods*, Thousand Oaks, California: Sage Publications Inc.

Bird, Carmel (1996) *Dear Writer: The Classic Guide to Writing Fiction*, 2nd edition, Sydney, Vintage.

Blum, Richard A (1984) *American Film Acting The Stanislavski Heritage*, Michigan: UMI Research Press.

Boeck, Rick (2007) "Ways of Seeing in American Beauty" in *Screen Education*, Issue 46, Winter 2007.

Bonime, Andrew, Pohlmann, Ken C. (1998) *Writing for New Media The Essential Guide to Writing for Interactive Media, CD-Roms, and the Web*, New York: John Wiley and Sons.

Bordwell, David (1979) "Art Cinema as a mode of film practice" *Film Criticism* vol. 4 no. I.

Bordwell, David (1985) *Narration and the Fiction Film*, Wisconsin: The University of Wisconsin Press.

Bordwell, David (1986) "Classical Hollywood Cinema: Narrational Principles and Procedures" in Rosen, Phillip (Ed) (1986) *Narrative, Apparatus, Ideology: A Film Theory Reader*, New York: Columbia University Press.

Bordwell, David (1989a) *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema*, Cambridge, Massachusetts: Harvard University Press.

Bordwell, David (1989b) "Historical Poetics of Cinema" in Palmer, R. Barton (ed.) *The Cinematic Text: Methods and Approaches*, New York: AMS Press (pp 56-61) also at http://www.geocities.com/david_bordwell/historiicalpoet.html

Bordwell, David (1993) *The Cinema of Eisenstein*, Cambridge Massachusetts: Harvard University Press.

Bordwell, David and Thompson, Kristin (1997) *Film Art: An Introduction*, 5th edition, New York: McGraw Hill.

Bordwell, David and Thompson, Kristin (2001) *Film Art: An Introduction*, 6th edition, New York: McGraw Hill.

Bordwell, David (2002) "Cognitive Film Theory"
@http://www.geocities.com/david_Bordwell/cognitive.htm. (Accessed 24/04/02).

Bordwell, David (2004) "Neo-Structuralist Narratology and the Functions of Filmic Storytelling" in Ryan, Marie-Laure (Ed) (2004) *Narrative across media: the languages of storytelling*, Lincoln: The University of Nebraska Press.

Bordwell, David (2008) *Poetics of Cinema*, New York: Routledge

Bovell, Andrew (2001) *Lantana*, Sydney: Currency Press.

Brande, Dorothea (1934) *Becoming a Writer*, reprint 1981, Los Angeles: Jeremy P. Tarcher, Inc.

Branigan, Edward (1992) *Narrative Comprehension and Film*, London: Routledge.

Brooks, Kevin (1999) *Metalinear Cinematic Narrative: Theory, Process and Tools*, PhD Diss., Massachusetts Institute of Technology Media Lab, Cambridge, Massachusetts.

Brophy, Kevin (1998) *Creativity Psychology, Analysis and Creative Writing*, Melbourne: Melbourne University Press.

Brown, Neil; Del Favero, Dennis; Shaw, Jeffrey and Weibel, Peter "Interactive Narrative as a Multi-temporal Agency" *iCinema* Centre for Interactive Cinema Research at http://icinema.cofa.unsw.edu.au/pdf/interactive_narrative.pdf Accessed 14 January 2008. Also at Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, MIT Press: Massachusetts.

Buchanan, Brian "War erupts over mobile TV", *The Australian*, 19 April, 2005.

Bush, Vannevar (1945) "As We May Think", *The Atlantic Monthly*: July, 1945, Volume 176. No 1; pp 101-108.

Butler, Jeremy, G. (2002) "The Internet and the World Wide Web" in Harries, Dan (Ed) (2002) *The New Media Book*, London: British Film Institute.

Caldwell, John Thornton (1995) *Televisuality: Style, Crisis, and Authority in American Television*, New Jersey: Rutgers University Press.

Caldwell, Sara and Kielson, Marie-Eve (2000) *So you want to be a Screenwriter?* New York: Allworth Press.

Calvino, Italo (1986) *The Uses of Literature* (Trans. Patrick Creagh) New York: Harcourt, Brace, Jovanovich.

Campbell, Joseph (1972) *The Hero with a Thousand Faces*, Princeton: Princeton University Press.

Carroll, Noel (1996) *Theorizing the Moving Image*, Cambridge, USA: Cambridge University Press.

Chatman, S. (1978) *Story and Discourse: Narrative Structure in Fiction and Film*, Ithaca and London: Cornell University Press.

Chaucer, Geoffrey (c1400) *The Canterbury Tales* (edited by Cawley, A. C. (1958) London: Everyman's Library, J.M. Dent & Sons Ltd).

Cobley, Paul (2001) *Narrative*, London: Routledge.

Coleridge, Samuel Taylor (c1831) *Biographia Literaria* in Stauffer, Donald A (Ed) (1951) *Selected Poetry and Prose of Coleridge*, USA: Random House.

Comolli, Jean-Louis (1980) "Machines of the Visible" in Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.

Cook, David A. (1981) *A History of Narrative Film*, New York: W.W. Norton & Company.

Cooper, Dona (1997) *Writing Great Screenplays for Film and TV*, (2nd edn) New York: Macmillan.

Crawford, Chris (1982) *The Art of Computer Game Design* ([http: www.vancouver.wsu.edu/fac/peabody/game-book/Coverpage.html](http://www.vancouver.wsu.edu/fac/peabody/game-book/Coverpage.html))

Cubitt, Sean (2002) "Spreadsheets, Sitemaps and Search Engines: Why Narrative is Marginal to Multimedia and Networked Communication" in Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Dalton, Kim “Australian Film Commission: State of the Nation” Address to National ScreenWriters Conference, Hepburn Springs, Vic, 12-14 July 2002.

Damaged Californians Interactive Drama (www.damagedcalifornians.com)

Daniel, Jack (1976) “Metz’ Grande Syntagmatique: Summary and Critique” *Film Forum*, Vol. 1 No1, Spring 1976 pp.78-90

Davenport, Glorianna (1996) “Electronic Story Nights: Interactivity and the Language of Storytelling,” Australian Film Commission, *Language of Interactivity Conference*, Summer, 1996.

Davenport, Glorianna and Murtagh, M (1997a) “Automatist Storyteller Systems and the Shifting Sands of Story”.IBM Systems Journal, vol 36, no3, pp446- 456 November 1999 also at <http://ic.media.mit.edu/pubs/journal/AutomatistIBM.pdf> (Accessed 1/ 11/ 07).

Glorianna Davenport and Brian Bradley (1997b) “Everyone's Cinema: Towards the Future of Cinematics “ Paper at Oberhausen Film Festival - April 28, 1997 @<http://mf.media.mit.edu/pubs/conference/EveryonesCinema.pdf>. Accessed 26/3/2001.

Davenport, Glorianna; Pan, Pengkai; Woods, Alison (2002)“Mobile Context Sensitive Cinematic Narratives” at <http://mf.medi.mitedu/pubs/journal/MobileCSNar.pdf>

Davenport, Glorianna (2003) “Improvisational Media Fabrics: Take One” in Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, Cambridge, Massachusetts: MIT Press. Also at <http://mf.media.mit.edu/pubs/other/MediaFabricTake1.pdf>

Davenport Glorianna and Mazalek, Ali (2005) “Dynamics of Creativity and Technological Innovation” Accessed 8/7/05.

Davenport, Glorianna, Barry, B., Kelliher, A., and Nemirovsky, P. (2004) “Media Fabric – a process-oriented approach to media creation and exchange” in *BT Technology Journal*, Vol 22 No 4. October 2004.

Davis, Galen (2002) *Game Noir: The Construction of Virtual Subjectivity in Computer Gaming*, An Honours Essay for Interdisciplinary Studies in Humanities, Stanford: Stanford University.

Delacour, Jonathon (1993) “As We May Imagine”, *The Filmmaker and Multimedia Selected Conference Paper October 1993*, Sydney: Australian Film Commission & Australian Film Television and Radio School.

Department of Communications, Information Technology and the Arts (DCITA)(2004- 2006) *Australia’s Strategic Framework for the Information Economy 2004-2006*, at <http://www2.dcita.gov.au/1e/framework>. (Accessed 2/12/04).

Del Favero, Dennis; Brown, Neil; Shaw, Jeffrey and Weibel, Peter (2005) “T_Visionarium: the aesthetic transcription of televisual databases” in Frohne, Ursula and Schieren (Eds) (2005) *Present, Continuous, Past*, New York: Springer.

Deren, Maya “Cinematography: The Creative Use of Reality” in Braudy, Leo and Cohen, Marshall (eds) (1999) *Film Theory and Criticism*, New York: Oxford University Press.

Dick, Bernard, F. *Anatomy of Film*, 3rd edition, New York: St. Martin’s Press.

Dudley, Jennifer (2005a) “Stars line up for roles in mobile phone soapie” *The Courier Mail*, 20 April, 2005

Dudley, Jennifer (2005b) “Coming to a Screen in Your Pocket” *The Courier Mail*, 21 July, 2005

Dudley, Jennifer (2005c) “Mobiles set to claim global title” *The Courier Mail*, 21 July, 2005

Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications.

Eichenbaum, Boris (1926, 1927) “The Theory of the Formal Method” in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press. (Eichenbaum’s “The Theory of the Formal Method” was first published in Ukrainian in 1926. The text used here is Lemon and Lee’s English translation from the Russian text as published in *Literatura: Teoriya, kritika, polemika* [1927] Leningrad. However all references to “The Theory of the Formal Method” in this thesis note the original year of publication, 1926, to distinguish this essay from Eichenbaum’s “Problems of Cine-Stylistics” published in *Poetika Kino* [1927]).

Eichenbaum, Boris (ed) (1927) *Poetika Kino* trans by Taylor, Richard (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications. (This is the first complete English translation of *Poetika Kino*).

Eichenbaum, Boris (1927) “Problems of Cine-Stylistics” in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications. All references in this thesis are to the Eagle translation.

Eisenstein, Sergei (1949) *Film Form*, New York: Harcourt, Brace and Co. This includes the essays, “The Cinematographic Principle and the Ideogram”(1929a) “The Filmic Fourth Dimension” (1929b), “A Dialectic Approach to Film Form” (1929c) “Methods of Montage”(1929d) and “The Structure of a Film (1929e).

Eisenstein, Sergei, *The Film Sense* (Ed Jay Leyda) (1975) San Diego: Harcourt, Brace & Company.

Egri, Lajos (1946) *The Art of Dramatic Writing*, New York: Simon and Schuster.

- Engeli, Maia (c2000) *Digital Stories: the Poetics of Communication*, Basel, Boston: Birkhauser.
- Eskelinen, Markku (2004) "Six Problems in Search of a Solution: The Challenge of Cybertext Theory and Ludology to Literary Theory" @ <http://www.dichtung-digital.com/2004/3/Eskelinen/index.htm>
- Everett, Anna & Caldwell, John, T (Eds) (2003) *New Media: Theories and Practices of Digitextuality*, New York: Routledge.
- Fat Cow Motel* (2003), Hoodlum Entertainment, Austar, ABC (Unreleased. Episode screened at *National Screenwriters Conference*, Hepburn Springs, Victoria, 12-14 July 2002) Also 13 part series screened by ABC (2003).
- Field, Syd (1994) *Screenplay - The Foundations of Screen Writing 3rd Edition*, New York: Dell Trade Paperback, New York.
- Flew, T. (2002) *New Media: An Introduction*, Melbourne: Oxford University Press.
- Forster, E. M. (1955), *Aspects of the Novel*. New York: Harcourt, Brace, Jovanovich,
- Freeman, David (2004) *Creating Emotion in Games*, Indianapolis: Pearson Education.
- Freitag, R. (1995) *Mixed Emotions* London: Royal College of Art (DVD Rom).
- Froug, William (1996) *Zen and the Art of Screen Writing - Insights and Interviews*, Los Angeles: Sillman-James Press.
- Gansing, Kristoffer (2003) "The Myth of Interactivity or the Interactive Myth?: Interactive Film as an Imaginary Genre" 5th *International Digital Arts and Culture Conference*, Melbourne: RMIT University.
- Garrand, T. (1997) *Writing for Multimedia*, Focal Press: Boston.
- Gawlinski, Mark (2003) *Interactive Television Production*, Oxford: Focal Press.
- Gianetti, Louis (1982) *Understanding Movies 3rd Edition*, New Jersey: Prentice-Hall, Inc.
- Gomery, Douglas (1985a) "The Coming of Sound: Technological Change in the American Film Industry" in Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.
- Grant, Barry Keith (Ed) (1995) *Film Genre Reader II*, Austin: University of Texas Press.
- Grenville, Kate and Woolfe, Sue (1993) *Making Stories: How Ten Australian Novels Were Written*, 2001 reprint, Sydney: Allen and Unwin.
- Grove, Elliot (2001) *Raindance Writers' Lab Write + Sell the Hot Screenplay*, Oxford: Focal Press.

- Hagger, Nick “Non-Goal Specific Simulation Game Case Study: Jurassic Park for X-Box” Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July 2002.
- Halliwell, Stephen (1986) *Aristotle’s Poetics*, Chapel Hill: The University of North Carolina Press.
- Hansen, Ander; Cottle, Simon; Negrine, Ralph and Newbold, Chris (1998) *Mass Communication Research Methods*, Hampshire: Macmillan Press.
- Harland, Richard (1999) *Literary Theory from Plato to Barthes: An Introductory History*, New York: St. Martin’s Press.
- Harries, Dan (Ed) (2002) *The New Media Book*, London: British Film Institute.
- Haslem, Wendy “Maya Deren: Eleanors Derenkowsky” *Senses of Cinema* <http://sensesofcinema.com/contents/directors/02/deren.html> (Accessed 13/10/04).
- Hayes, Gary (2005) LAMP
- Helfand, Jessica (2001) *Screen Essays on Graphic Design, New Media and Visual Culture*, New York: Princeton Architectural Press.
- Herman, David (Ed) (1999) *Narratologies: New Perspectives on Narrative Analysis*, Ohio: Ohio State University Press.
- Heyward, Megan (2002) *Cyberwrite Now*, Address to Australian Writers Guild Workshop 23-24 February, 2002, Sydney, Australia
- Heyward, M. (1997) *I Am a Singer*, Sydney: University of Technology.
- Heyward, M. (2001) *Of Day, Of Night*, Sydney: University of Technology.
- Heyward, Megan, 25 February 2002, Interview with Margaret McVeigh, Sydney: Sydney University of Technology.
- Heyward, Megan (c2000) online interview at www.storycentre.org/diner/pages/mh4.html. (Accessed 4/6/07).
- Hicks, Neill, D. (date unknown) *Screenwriting 101: The Essential Craft of Feature Film Writing*, California: Michael Weise Productions.
- Hill, John and Gibson, Pamela Church (Eds) (2000) *Film Studies: Critical Approaches*, Oxford: Oxford University Press.
- Homer (c1000 BC) *The Odyssey* (translated by Rieu, D.C.H. (2003) London: Penguin Books.

- Houghton, Andrew (1994) *Writing the Character Centred Screenplay*, Berkeley: University of California Press.
- Humphries, Reynold (1982) *Fritz Lang: Genre and Representation in his American Films*, Baltimore: The John Hopkins University Press.
- Hutchinson, Andrew (2003) "Analysing the Performance of Interactive Narrative", 5th *International Digital Arts and Culture Conference*, Melbourne: RMIT University.
- Interactive Cinema Group, MIT Media Lab (www.ic.mit.edu.au) also known as Media Fabric Group.
- Iser, Wolfgang (1978) *The Act of Reading*, Baltimore: The John Hopkins University Press.
- Jacka, Marion (2001) *Broadband Media in Australia*, Sydney: Australian Film Commission.
- Jacka, Elizabeth (1997) "Film" in Cunningham, Stuart and Turner, Graeme (Eds) (1997) *The Media in Australia* 2nd Edition, xxx: Allen & Unwin.
- Jackson, Shelley *Ineradicable Stain* (www.ineradicablestain.com). (Accessed 12/4/2002).
- Jackson, Sally "Interactive domination beats FTA" *The Australian* November 27-December 3, 2003.
- Jakobson, R. (1933) "Is the Cinema in Decline?" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbour: Michigan Slavic Publications.
- James, Henry (c1934) *The Art of the Novel*, New York: Charles Scribner's Sons.
- Jameson, Fredric (1974) *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism*, Princeton, N.J : Princeton University Press.
- Jenkins, Henry ((2004) "The Work of Theory in the Age of Digital Transformation" in Miller, Toby and Stam, Robert (Eds) (2004) *A Companion to Film Theory*, MA USA: Blackwell Publishing.
- Jones, Chris, and Jolliffe, Genevieve (1996) *The Guerrilla Film Makers Handbook*, London: Cassell.
- Karena, Cynthia "New Media Through the MIFF (Melbourne International Film Festival) Prism" *Metro Magazine* No 134, 2002.
- Kazansky, B. (1927) "The Nature of Cinema" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbour: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.
- Kinder, Marsha (2002) "Narrative Equivocations between movies and games" in Harries, Dan (2002) *The New Media Book*, London: British Film Institute.

King, Geoff and Krzywinska, Tanya (Eds) (2002) *Screenplay cinema/videogames/interfaces*, London: Wallflower Press

Korolenko, Michael (1997) *Writing for Multimedia: A Guide and Sourcebook for the Digital Writer*, Belmont, CA: Wadsworth Publishing Company.

Kozloff, Sarah (1992) "Narrative Theory and Television" in Allen, Robert, C. (ed) (1992) *Channels of Discourse, Reassembled*, (2nd edition) London: Routledge

Kuleshov, Lev (1974) *Lev Kuleshov on Film; Writings of Lev Kuleshov* (translated and edited by Ronald Levaco) Berkeley: University of California Press.

Lab 3000, Xmedia Lab Day Conference, Melbourne, 2004

Landow, George P. (1992, 1997) *Hypertext 2.0 The Convergence of Contemporary Critical Theory and Technology*, Baltimore: The John Hopkins University Press.

Landow, George P. (Ed) (1994) *Hypertext Theory*, Baltimore: The John Hopkins University Press.

Laurel, Brenda (1993) *Computers as Theatre*, Massachusetts, Addison Wesley.

Le Grice, Malcolm (2001) *Experimental Cinema in the Digital Age*, London: British Film Institute .

Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.

Piotrovshy, A. (1927) "Towards a Theory of Film Genres" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Lothe, Jakob (2000) *Narrative in Fiction and Film*, Oxford: Oxford University Press.

Lotman, Ju. (1976) *Semiotics of Cinema*, (translated by M. Suino) Ann Arbor: Michigan Slavic Publications.

Ludlow, Peter (Ed) (1996) *High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace*, Cambridge, Mass: The MIT Press.

Lumet, Sidney (1995) *Making Movies*, London: Bloomsbury.

Lunenfeld, Peter (2002) "The Myths of Interactive Cinema" in Ryan, Marie-Laure (Ed) (2004) *Narrative across media: the languages of storytelling*, Lincoln: The University of Nebraska Press also in Harries, Dan (Ed) (2002) *The New Media Book*, London: British Film Institute.

McFarlane, Brian (2005) "The Matrix: Cult Classic or Computerized Con?" in *Screen Education*, Issue 41, Summer 2005.

McGrath, Declan and MacDermott, Felim (eds.) (2003) *Screencraft: Screenwriting*, Switzerland: Rotovision.

McKee, Robert (1998) *Story, Substance, Structure, Style and the Principles of Screenwriting*, London: Methuen.

McKee, Robert (2003) *The Art Film*, Seminar, 26 February, 2003, the Valhalla Cinema, Sydney. Australia.

Malcolm, Ian (2002) "Scripting Game Cinematics - Theory, processes, practicalities and pitfalls of designing and writing cinematic sequences/in game dialogue" Unpublished paper, National Screen Writers Conference, Hepburn Springs, Vic, 12-14 July.

Manguel, Polly (2004) *501 Must-See Movies*, London: Bounty Books.

Manovich, Lev (1994-1997) *Little Movies: Prolegomena for Digital Cinema* at <http://www.manovich.net/little-movies/enter.html>

Manovich, Lev (1999) *What is Digital Cinema?* In Lunenfeld, Peter (Ed) *The Digital Dialectic: New Essays on New Media*, Cambridge, Massachusetts: The MIT Press.

Manovich, Lev (2001) *The Language of New Media*, Cambridge, Massachusetts: The MIT Press.

Manovich, Lev (2003) Interview with Margaret McVeigh, COFA, Sydney, April 8, 2003.

Manovich, Lev and Kratky, Andreas (2005) *Soft Cinema: Navigating the database*, (DVD video and accompanying booklet) Cambridge, Massachusetts: The MIT Press.
(Also at http://www.manovich.net/cinema_future/toc.htm and <http://www.softcinema.net/form.htm>)

Marie, Michel (1997) *The French New Wave*, trans. by Richard Neupert (2003), Oxford: Blackwell Publishing.

Mateas, Michael (2001) "A Preliminary Poetics for Interactive Drama and Games" SIGGRAPH Conference, LA, 12-17 August 2001 (Art and Culture paper).

Mateas, Michael (2002) *Interactive Drama, Art and Artificial Intelligence*, PhD dissertation Pittsburgh: School of Computer Science, Computer Science Department, Carnegie Mellon University

Mateas, Michael and Stern, Andrew (2005a) "Build It to Understand It: Ludology Meets Narratology in Game Design Space", Proceedings of DiGRA (2005) Conference: *Changing Views – Worlds in Play*.

- Mateas, Michael and Stern, Andrew (2005b) "Structuring Content in the *Façade* Interactive Drama Architecture" American Association for Artificial Intelligence (www.aaai.org) accessed 14/8/07.
- Matejka, Ladislav and Titunik, R. (eds.) (1976) *Semiotics of Art: Prague School Contributions*, Cambridge Massachusetts: The MIT Press.
- Matthews, Kate (2007) "Running in Circles: Run Lola Run" in *Screen Education*, Issue 45 Autumn, 2007.
- Metz, Christian (1974) *Film Language A Semiotics of the Cinema*, New York: Oxford University Press.
- Mikhailov, E. and Moskvina, A. (1927) "The Cameraman's Part in Making a Film" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. (All references are to the Eagle translation). Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.
- Miller, Carolyn, Handler (2004) *Digital Storytelling: a creator's guide to interactive entertainment*, Oxford: Focal Press.
- Miller, William, C. (1980) *Screenwriting for Narrative Film and Television*, New York: Hastings House, Publishers.
- MIT Media Lab Europe home page @ <http://medialabeurope.org/research/group.php?id=9>.
- Monaco, James (1981) *How to Read a Film: The Art, Technology, Language, History, and Theory of Film and Media*, New York: Oxford University Press.
- Morrison, Mark (2002) "Turning Words into Games" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.
- Mueller, Kathy (2002) "Genre, Gameplay and Platforms" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.
- Mukarovsky, Jan (1938) "Poetic Reference" in Matejka, Ladislav and Titunik, R. (eds.) (1976) *Semiotics of Art: Prague School Contributions*, Cambridge Massachusetts: The MIT Press.
- Murray, Janet H. (1997) *Hamlet on the Holodeck - The Future of Narrative in Cyberspace*, New York: The Free Press.
- Murray, Janet, H. (1995) "The Pedagogy of Cyberfiction: Teaching a Course on Reading and Writing Interactive Narrative" in Barrett, Edward and Redmond, Marie (Eds.) *Contextual Media: Multimedia and Interpretation*, Massachusetts: Massachusetts Institute of Technology.

- National Institute of Dramatic Art and Australian Film, Television and Radio School. *Love Cuts* @ (www.lovecuts.nida.edu.au). (Accessed 12/4/ 04)
- National Institute of Dramatic Art (NIDA) & University of Wollongong (1998) *Stage Struck - Australia on CD*
- Nelmes, Jill (1996) *An Introduction to Film Studies*, London: Routledge
- Nguyen, Maria (2002) "Switched on TV"
(<http://www.theage.com.au/articles/2002/09/06/1031115930136.html?oneclick=true> .
(Accessed March 18, 2005).
- Orwell, George (1949, 1974) *1984*, London: Penguin Books in association with Secker & Warburg.
- O'Sullivan, Tim; Hartley, John; Saunders, Danny, Montgomery, Martin and Fiske, John (1994) *Key Concepts in Communication and Cultural Studies*, London and New York: Routledge.
- O'Shaughnessy, Michael and Stadler, Jane (2002) *Media and Society 2nd*, Melbourne: Oxford University Press.
- Owen, Alistair (ed.)(2003) *Story and Character: Interviews with British Screenwriters*, London: Bloomsbury.
- Oz Group, Carnegie Mellon University (www.cs.xmu.edu/project/oz)
- Pentes, Tatiana (2002) *Strange Cities*, Sydney: University of Technology.
- Peters, Jan (1981) *Pictorial Signs and the Language of Film*, Amsterdam: Rodopi.
- Piotrovsky, A (1927) "Toward a Theory of Cine-Genres" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications.
- Pledger, David and Shaw, Jeffrey (2004) *Eavesdrop*, Digital Installation at Queensland University of Technology, Kelvin Grove Campus, September 2004
- Pooley, Robert C. (1968) *England in Literature*, Glenview, Illinois: Scott, Foresman and Company.
- Porter, Michael, J., Larson, Deborah, L., Harthcock, Alison and Nellis, Kelly Berg (2002) "Re (de)fining Narrative Events: Examining Television Narrative Structure" *Journal of Popular Film and Television*, Volume 30 No.1 Spring 2002.
- Prince, Gerald (1982) *Narratology: The Form and Functioning of Narrative*, Berlin: Mouton Publishers.

Propp, Vladimir (1968) *Morphology of the Folktale*, 2nd edition, (1st edition translated by Scott, Laurence, 2nd edition revised and edited by Wagner, Louis, A.) Austin: University of Texas Press.

Propp, Vladimir (1984) *Theory and History of Folklore*, (translated by Martin, Ariadna Y. and Martin, Richard P.) Manchester: Manchester University Press.

Rackeman, Melinda *Carrier* (www.subtle.net). (Accessed 14/5/04).

Red Ant Enterprises, (1993) *Myst*, The Learning Company.

Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Rimmon-Kenan, Shlomith (1983) *Narrative Fiction: Contemporary Poetics*, London: Methuen.

Robertson, Tracey and Mayfield, Nathan (2002) "Interactive Television Case Study - Fat Cow Motel" Unpublished paper, *National ScreenWriters Conference*, Hepburn Springs, Vic, 12-14 July.

Rockstar Games (2003) *Grand Theft Auto: Vice City*, Rockstar Games

Rodowick, D. L. (2001) *Reading the Figural, or, Philosophy after the New Media*, Durham and London: Duke University Press.

Rosen, Phillip (Ed) (1986) *Narrative, Apparatus, Ideology A Film Theory Reader*, New York: Columbia University Press.

Ryan, Marie-Laure (Ed) (2004) *Narrative across media: the languages of storytelling*, Lincoln: The University of Nebraska Press.

Ryan, Marie-Laure (Ed) (1999) *Cyberspace Textuality: Computer Technology and Literary Theory*, Bloomington: Indiana University Press.

Ryan, Marie-Laure (2001) *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*, Baltimore: John Hopkins University Press.

Ryan, Marie-Laure (1997) "Interactive Drama: Narrativity in a Highly Interactive Environment" *Modern Fiction Studies* 43.3 (1997) 677-707

Samsel, Jon and Wimberley, Darryl (1998) *Writing for Interactive Media*, New York: Allworth Press.

Sarris, Andrew (1985) *The American Cinema: Directors and Directions 1929-1968*, Chicago: University of Chicago Press. First published 1968.

Schneider, Steven Jay (ed) (2003) *1001 Movies You Must See Before You Die*, Sydney: ABC Books

- Seger, Linda (1990) *Creating Unforgettable Characters*, New York: Henry Holt and Company.
- Seger, Linda (1994) *Making a Good Script Great*, Hollywood: Samuel French.
- Seger, Linda (1992) *The Art of Adaptation: Turning Fact and Fiction into Film*, New York: Henry Holt and Company.
- Shaw, Jeffrey and Weibel, Peter (2003) *Future Cinema: The Cinematic Imaginary after Film*, Cambridge, Massachusetts: MIT Press.
- Shklovsky, Victor (1917) "Art as Technique" in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.
- Shklovsky, Victor (1921) "Sterne's *Tristram Shandy*: Stylistic Commentary" in Lemon, Lee T. and Reis, Marion, J. (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.
- Shklovsky, Victor (1927) "Poetry and Prose in the Cinema" in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.
- Shoup, Barbara, and Denman, Margaret Love (2001) *Novel Ideas: Contemporary Authors Share the Creative Process*, Indianapolis: Alpha Books.
- Skartveit, Hanne-Lovise and Viste, Magnhild (2003) "System Dynamics as Story Engine for Interactive Video", *5th International Digital Arts and Culture Conference*, Melbourne: RMIT University.
- Smiley, Sam (1971) *The Structure of Action*, New Jersey: Prentice Hall Inc.
- Smith, Susan (2000) *Hitchcock: Suspense, Humour and Tone*, London: British Film Institute.
- Spigel, Lynn & Olsson, Jan (Eds) (2004) *Television after TV: Essays on a Medium in Transition*, Durham & London: Duke University Press.
- Staiger, Janet (2000) *Perverse Spectators: the Practices of Film Reception*, New York: New York University Press.
- Stam, Robert; Burgoyne, Robert; FlitterMan-Lewis, Sandy (1992) *New Vocabularies in Film Semiotics Structuralism, Post Structuralism and beyond*, London and New York: Routledge.
- Stam, Robert (2000) *Film Theory An Introduction*, Massachusetts: Blackwell.
- Stansberry, Dominic (1998) *Labyrinths: The Art of Interactive Writing and Design - Content Development for New Media*, Wadsworth Publishing Company.
- Stauffer, Donald, A. (ed.) (1951) *Selected Poetry and Prose of Coleridge*, Princeton: Modern Library, Random House.

- Sternberg, Meir (1978) *Expositional Modes and Temporal Ordering in Fiction*, Baltimore and London: The John Hopkins University Press.
- Stillinger, Jack (ed.) (1965) *William Wordsworth Selected Poems and Prefaces*, Boston: Houghton Mifflin.
- Stuart, Audrey “Be quiet, I am watching the phone” *The Courier Mail*, 12 April, 2005
- Summers, Jodi (1998) *The Interactive Music Handbook*, New York: Allworth Press.
- Szilas, Nicolas, Marty, Olivier and Rety, Jean-Hugues (2003) “Authoring Highly Generative Interactive Drama”, *Virtual Storytelling :Using Virtual Reality Technologies for Storytelling*, Second International Conference, IVCS 2003 Toulouse, France, November 2003, Germany: Springer.
- Tabbi, Joseph and Wutz, Michael (1997) *Reading Matters: Narrative in the New Media Ecology*, Ithaca and London: Cornell University Press.
- Tan, Ed, S (1996) *Emotion and the Structure of Narrative Film as an Emotion Machine*, Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Taylor, Richard, and Christie, Ian (eds.) (1988) *The Film Factory: Russian and Soviet Cinema in Documents, 1986-1939*, Cambridge Massachusetts: Harvard University Press.
- Tifflin, John and Nobuyoshi, Terashima (2002) *HyperReality: Paradigm for the Third Millennium*, Routledge, Book Review, *The Australian*, 3 April.
- Telotte, J.P. (1989) *Voices in the Dark: Narrative Patterns of Film Noir*, Urbana: University of Illinois Press.
- Thompson, Kristin (1988) *Breaking the Glass Armor: Neoformalist Film Analysis*, New Jersey: Princeton University Press.
- Thompson, Kristin (1999) *Storytelling in the New Hollywood: Understanding Classical Narrative Technique*, Cambridge, Massachusetts: Harvard University Press.
- Todorov, Tzvetan (1975) *The fantastic: a structural approach to a literary genre* (Trans Howard, Richard) New York: Ithaca.
- Todorov, Tzvetan (1977) *The Poetics of Prose* (Trans Howard, Richard) Ithaca, NY: Cornell University Press.
- Tomashevsky, Boris (1925) “Thematics” in Lemon, Lee T. and Reis, Marion, J. (ed and trans) (1965) *Russian Formalist Criticism: Four Essays*, Lincoln and London: University of Nebraska Press.
- Tredall, Nicolas (2002) *Cinemas of the Mind: A Critical History of Film Theory*, Cambridge: Icon Books Ltd.

Trend, David (Ed) (2001) *Reading Digital Culture*, Massachusetts: Blackwell Publishers Ltd.

Twentyfourseven, Interactive Drama, McElroy, SBS, 2002.

Tynjanov, Yuri (1927) "The Fundamentals of Cinema" in Eagle, Herbert (ed and trans)(1981) *Russian Formalist Film Theory: An Introduction*, Ann Arbor: Michigan Slavic Publications. (All references are to the Eagle translation).. Also in Taylor, Richard (ed) (1982) *The Poetics of Cinema: Russian Poetics in Translation*, Oxford RPT Publications.

Utterson, Andrew (2005) *Technology and Culture: The Film Reader*, London and New York: Routledge.

Vogler, Christopher, (1998) *The Writer's Journey: Mythic Structure for Writers*, Studio City, CA: M. Wiese Productions.

Walker, Jill (2004) "How I was played by Online Caroline"
(<http://jilltxt.net/txt/onlinecaroline.html>) . (Accessed March 18, 2005).

Walker, Jill (2003) "Performing Fictions: Interaction and Depiction" 5th *International Digital Arts and Culture Conference*, Melbourne: RMIT University.

Weinbren, Grahame (2002) "Mastery (Sonic C'est Moi)" in Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Willemen, Paul (2002) "Reflections on Digital Imagery: Of Mice and Men" in Reiser, Martin and Zapp, Andrea (Eds) (2002) *New Screen Media Cinema/Art/Narrative*, London: British Film Institute.

Williams, Christopher (1996) *Cinema: the Beginnings and the Future*, London: University of Westminster Press.

Wollen, Peter (1998) *Signs and Meaning in the Cinema*, London: British Film Institute.

Wood, Catherine (2006) "Sometimes you need the help of the Universe: *Run Lola Run*" in *Screen Education*, Issue 42 Autumn, 2006.

FILMOGRAPHY

All About My Mother (1999)

American Beauty (1999)

Amores Perros (2000)
Ballet Mecanique (1924)
The Big Chill (1983)
Body Heat (1981)
The Cabinet of Dr Caligari (1920)
Un Chien Andalou (1929)
The Circle (2001)
Citizen Kane (1941)
Go (1999)
Groundhog Day (1993)
Hiroshima Mon Amour (1959)
Lantana (2001)
The Matrix (1999)
Magnolia (1999)
Meshes of the Afternoon (1943)
Moulin Rouge (2001)
Night and Fog (1955)
Pulp Fiction (1994)
Memento (2000)
Raise The Red Lantern (199x)
Rashomon (1950)
Run Lola Run (1999)
Sliding Doors (1999)
The Purple Rose of Cairo (1985)
Timecode (2000)

APPENDIX: A

PROPP'S FUNCTIONS (1968)

Preparatory section

a Villainy

A Lack, Insufficiency

B Mediation, the connective incident

C Consent to counteraction

^ Departure, dispatch of the hero from home

D The first function of the donor

E Reaction of the hero (positive or negative)

F The acquisition, receipt of a magical agent

G Transference to a designated place; guidance

H The hero struggles with the villain

I Victory over the villain

J Branding or marking the hero

K The liquidation of misfortune or lack

^ Return of the hero

P Pursuit of the hero

R Rescue of the hero

O Unrecognised arrival

L Claims of a false hero

M Difficult task

Q Recognition of the hero

Ex Exposure of the false hero

T Transfiguration

U Punishment of the false hero or villain

W* Wedding and accession to the throne

X Unclear or alien forms

< Leave-taking at a road marker

Y Transmission of a signalling device

Mot. Motivations

Pos. or + Positive result for a function

Neg. or – Negative result for a function

Connectives

Connectives trebled

APPENDIX: B THE SCENE FUNCTION MODEL
 (Porter, Larson, Harthcock & Nellis, 2002)

SIX FUNCTIONS OF KERNEL SCENES

<u>Scene Function</u>	<u>Description</u>
Disturbance	Reveals the initiating event (disruption) that upsets the balanced life of the lead character and leads to the ensuing action of the story. The nature of the basic conflict of the story is now established. This may occur off-camera and may be revealed only through dialogue.
Obstacle	Introduces opposing force May reveal the antagonist. Answers the question, "Who or what is standing in the way of the hero achieving his/her goal?"
Complication	Reveals a new course of action; it complicates the situation. Introduces a new angle to an existing complication or may present a new opposing force. Complications can include character, circumstances, events, mistakes, misunderstandings, discovery etc
Confrontation	When the hero confronts an obstacle.
Crisis	When opposing forces are in conflict and the outcome is uncertain. This is the decisive confrontation for the story, the turning point in the action, also known as the climax.
Resolution	The results of the crisis are revealed, the balance is restored. This scene follows the crisis scene; may occur within the crisis scene.

TWELVE FUNCTIONS OF SATELLITE SCENES

<u>Scene Function</u>	<u>Description</u>
Exposition	Presents background information (backstory)
Dramatic Question	Raises basic question the story will answer; relates to the conflict of the story. May explain the nature of the disturbance.
Intro of new character	Introduces a new set of characters.
Action	Shows characters as they carry out their plan or perform their job. Most “in-transit” scenes (car chase scenes) serve this function.
Plan revealed	Presents the hero’s goal for eliminating the disturbance.
Relationship Affirmation	Focus on the interaction between or among characters. No new developments or changes in relationships are presented. Characters may show supportive action of one another. Characters talk about incidental incidents or personal events unrelated to the main story.
Clarification	Solidifies or repeats the dramatic question by clarifying the basic conflict. May present new information about the conflict or help viewer to understand the ramifications of the conflict and the pursuant action.
Conflict continues	Keeps audience aware of the basic conflict of the story. The scene heightens suspense, anticipation, tension. May introduce “minor” revelations in the conflict. The scene “teases” the audience, keeps viewer interested in the story.
Relief	Provides a release for the audience, a diversion from preceding story. Provides relief from the emotional intensity found in preceding scene.
Theme	The “mallet” scene (you are hit over the head with the theme of the story if you haven’t gotten it now). Can explain “why” character has his or her goals. May explain a character’s behaviour or attitude. Will usually reflect cultural or social issues, values and beliefs. Sole function of this scene is to underscore the theme of the story.
Foreshadowing	Foreshadows a later event or a larger episodic storyline. Gives later events more significance. Creates anticipation for future conflict. May reveal character traits that factor into the story later. Establishes credibility needed later.
Ambiance	Draws the audience into the story at an emotional level. Adds dimension to the characters by revealing their emotional response to the event or another character. Usually related to the theme of the story. Serves to intensify emotional response to the story.

APPENDIX C:

The *Grande Syntagmatique* (Metz, 1974: 146)

Autonomous segments

- 1. Autonomous shots (Subtypes: the sequence shot plus four kinds of insert)

- Syntagmas

- Achronological – 2. Parallel Syntagma

Syntagmas

3. Bracket Syntagma

- Chronological – 4. Descriptive Syntagma

Syntagmas

- Narrative - 5. Alternate Narrative Syntagma

Syntagmas

- Linear Narrative Syntagmas

– 6. Scene

Sequences- 7. Episodic sequence

8. Ordinary sequence
