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From Page to Screen:
Placing Hypertext Fiction in an Historical and Contemporary Context of Print and Electronic Literary Experiments

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Contents

Chapter 1: Introduction

1.1: Introduction p.1
1.2: From Page to Screen: Print Text vs. Electronic Text p.3
1.3: Electronic Text and Postmodern Theory p.8
1.4: Hypertext p.10
1.4.1: The History of Hypertext and Hypertext Programs p.10
1.4.2: HyperCard p.12
1.4.3: Storyspace p.14
1.4.4:.The World Wide Web p.15
1.5: From 'Mode of Production' to 'Mode of Information' p.16
1.6: Revolution vs. Evolution p.18
1.7: Structural Outline of the Thesis p.22

Chapter 2: A New Kind of Text?: Non-Linearity

2.1: Definitions of the Term Non-Linearity p.24
2.2: Multiplicity 1: mutually exclusive developments: The infinite possibilities of the "Forking Path" p.28
2.2.1: Lost in Hyperspace? The Problem of Orientation p.34
2.2.2: Predictability p.37
2.2.3 Coherence p.39
2.2.4: Temporality p.40
2.2.5: Reading Order p.42
2.2.6: Plot-branching fiction p.44
2.3: Multiplicity 2: Simultaneity (of viewpoints / of narrative strands) p.52
2.4: Mosaic narratives p.60
2.4.1: Parataxis vs. Hypotaxis p.61
2.4.2: Textual Collage: organised according to a ruling principle p.65
2.4.3: Closure p.73
2.4.4: Patchwork Girl: Hypertextual Collage and Interactivity p.77
2.4.4: Collage without an organising principle: Randomness p.81
2.5: Conclusion p.83

Chapter 3: A New Kind of Reader?: Interactivity

3.1: The Temptation of Interactivity p.88

3.1.1: Interactive Art p.90

3.1.2: Interactive Literature p.90

3.2: Definitions of Interactivity and of Interactive Literature p.93

3.3.1: Interactivity as Conversation: Second Orality p.93

3.2.2: Interactivity as Performance: Drama p.99

3.2.3: The History of Interactive Fiction p.103

3.3: Reader-Response Theories p.116

3.4: A New Definition of Interactivity p.127

3.4.1: Collaboration p.129

Chapter 4: A New Kind of Author?: Collaborative Writing

4.1: Explorative vs. Constructive Hypertexts p.132

4.2: Singular Authors - Singular Voices? p.134

4.2.1: What is an author? p.135

4.2.2: The notion of the genius p.136

4.2.3: Fiction Factories p.138

4.2.4: The Myth of the Solitary Genius p.140

4.3: Filtering out bad writing? Alternative Publishing on the Internet p.143

4.3.1: Avant-Garde p.145

4.3.2: Avant-Pop p.146

4.3.3: Collaboration p.148

4.3.4: Intertextuality p.149

4.4: Technology and the Separation of Author and Text p.150

4.5: Large-Scale Literary Collaborations p.156

4.5.1: Linear Collaboration on the Internet p.158

4.5.2: Linear Collaboration in Print p.159

4.5.3: Non-linear collaborations (electronic format only) p.163

4.5.4: Other Structures of Collaborative Projects: City Metaphors p.165

4.6: Conclusion p.171

4.6.1: The Role of the Editor p.173

Chapter 5: Computer-Generated Literature

5.1 : Prose vs. Poetry p.178
5.2: The Computer as Author p.181
5.2.1: TALE-SPIN p.181
5.2.2: Question for Literary Studies p.184
5.2.3: Racter p.186
5.3: The Computer as Collaborator p.193
5.3.1: MacProse p.195
5.4: Randomness and Chance p.198
5.5: Conclusion p.201

Chapter 6: Conclusion

6.1: Evolution or Revolution? p.209
6.2: OUT in Print / OUT online p.211
6.3: The Book as Carrier of Information and a Symbol of Culture p.217
6.4: Literature on Screen - Textual vs Visual p.220
6.5: Conclusion p.226

Bibliography p.228

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Abstract

From Page to Screen:
Placing Hypertext Fiction in an Historical and Contemporary Context of
Print and Electronic Literary Experiments

Only recently has our perception of the computer, now a familiar and ubiquitous element of everyday life, changed from seeing it as a mere tool to regarding it as a medium for creative expression. Computer technologies such as multimedia and hypertext applications have sparked an active critical debate not only about the future of the book format, ("the late age of print" [Bolter] is only one term used to describe the shift away from traditional print media to new forms of electronic communication) but also about the future of literature.

Hypertext Fiction is the most prominent of proposed electronic literary forms and strong claims have been made about it: it will radically alter concepts of text, author and reader, enable forms of non-linear writing closer to the associative working of the mind, and make possible reader interaction with the text on a level impossible in printed text.

So far the debate that has attempted to put hypertext fiction into a historical perspective has linked it to two developments. Firstly the developments in computer technology that made hypertext not only possible but also widely accessible and secondly a tradition of postmodern theory, where characteristics attributed to hypertext echo concepts of fragmentation, multiplicity and instability that theorists like Barthes and Derrida have formulated previously and that have led to the notion of hypertext as an "authentic, yet functional postmodern form" [Roberts]

A third element that is not generally subject to critical evaluation is the practice of (post)modern writing in which a number of authors consciously break with the linearity of print conventions in favour for a more fragmented narrative and presentation as well as actively inviting the reader's participation in what Barthes calls "writerly" text. There are two reasons why these "proto-hypertexts" have been widely ignored or dismissed: Hypertext is still widely defined as exclusive to the electronic realm and is furthermore generally perceived in oppositional pairs in contrast to print, i.e. non-linear vs. linear and interactive vs. passive, which conceptually does not leave room for a study of an "evolution" out of existing forms of writing practice.

By examining hypertext fiction in a context of print experiments (Cortazar, Borges, B.S. Johnson, Andreas Okopenko, Raymond Queneau, Miroslav Pavic, Italo Calvino) and also in a context of other forms of digital literary experimentation (collaborative projects and computer-generated writing), this thesis aims to, on a diachronic level, reincorporate hypertext fiction into an evolutionary (though radical) literary tradition and examines the manner in which concepts which originated in this tradition have been taken over often very literally and without much redefinition. On the a-historical, synchronic level, this study explores some of the possible formats for literature in the new electronic textual media: hypertext fiction, collaborative writing projects, computer-generated writing and the different challenges these present to our understanding of literature.

After an introduction in Chapter 1, Chapter 2 and 3 discuss two of the keywords of hypertext theory, its "grand narratives" (non-linearity and interactivity) and the appropriation of the terminology to hypertext theory and to hypertext fiction. Chapter 4 and 5 will look at alternative, though related, approaches to electronic fiction: Chapter 4 will examine aspects of collaborative writing in both a print and a digital environment while computer-generated writing stands at the centre of Chapter 5.

Chapter 1: Introduction

1.1: Introduction

In 1987 Michael Heim, in one of the first philosophical studies on the impact that word processing was and would be having on our society and culture, posed the following initial question:

> Does the conversion of twentieth-century culture to a new writing technology portend anything like the revolutionary changes brought about by the invention of the printing press and the widespread development of literacy? If so, what are we to make of the changes?[1]

These questions mark the beginning of active and fierce debates on the subject of computer writing and its impact on contemporary culture and literacy, which, more than ten years later, still remain largely unanswered.

These on-going debates have been both caused and influenced by a rapid development of computer technology over the last two decades, which have fundamentally changed the reading public's attitude and access to the electronic medium. Computers have become part of our lives, either disguised as the technology that operates cash-points, supermarket check-outs and many other everyday features we could not do without, or visible on top of our desk at home or in the office at work. We use them to create texts and even more to edit them, using the facilities of a word-processor to shift words, sentences or whole sections around, to delete and add parts of texts at any time. We also use them to distribute our texts, to pass them on to others on disks or through computer networks, for increasingly the aim of word-processing is no longer the printed text, but text that will remain in electronic form: eMail, electronic journals, library catalogues etc. Computerised text has become widespread, familiar and indispensable.

[1] Michael Heim, *Electric Language: A Philosophical Study of Word Processing* (New Haven and London: Yale University Press, 1987), p.2.

Marshal McLuhan argues that the characteristic of cultural evolution is the internalisation of technology[2] - tools no longer perceived as tools but as an aspect of our natural environment. The computer has certainly lost much of its aura of impenetrable technologicality, it has become more transparent, a site of creativity and culture rather than business and science, or, as Jørgen Bang argues: "From being a tool, the computer has become a medium"[3] This medium has the characteristic that it can contain a number of different media: text, images, film, sound can all be digitised and included within each other. This 'multimedia' aspect, the possible use of computers for creative work, has become a larger selling point than the more 'useful' applications for which computer equipment used to be sold[4] .

It is around these creative issues that the theoretical debate has focused and in the case of electronic text its consequences for literature have been at the centre of attention. Two areas have come under special scrutiny: computer applications for the teaching and analysis of literature and the possibility for new forms of literary production that could develop in a textual environment outside print.

Of all possible applications, the use of electronic (hyper)text systems for the production of fiction is probably one of the most critically debated[5] . Initial strong, even enthusiastic, voices in favour of computer literature have recently been replaced by a more realistic, if not antagonistic view, while at the same time the number of studies published on the subject is on the wane. This slowing down of the critical debate is due mainly to two factors: a fading fascination with computer technology because of its increasing ubiquity and familiarity; but also the fact that electronic literature has so far only partly lived up to

[2] Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: Signet, 1964), p.64.

[3] Jørgen Bang, "The Meaning of Plot and Narrative", in: *The Computer as Medium*, ed.by Peter Bøgh Andersen, Berit Holmqvist and Jens F. Jensen (Cambridge: Cambridge University Press, 1993), p. 209.

[4] Like, for example, spreadsheets. VisiCalc, the first spreadsheet programme that run on early Apple computers made accounting and business calculations, which were previously tedious and extremely time consuming, a great deal easier and consequently boosted computer sales enormously. It has been described as one of the main factors why "personal computers crossed the line from a hobbyist obsession to a compelling tool" (Steven Levy, *Insanely Great* (Harmondsworth: Penguin, 1995), p.69.)

[5] Already as early as 1992, Richard Gees observed in his introduction to the "After the Book" issue of *Perforations*, vol.1, no.3 (Summer 1992) at: `http://www.pd.org/perforations/perforations.html`) an unbalanced ratio of critical text about fiction to the fiction itself (300 to 20). And even though he limits his estimates to published (i.e. for sale) fiction only and ignores freely available shareware and internet projects, the imbalance still exists. (For a collection of text in both areas see Michael Shumate's excellent extensive collection on hypertext fiction and theory, *Hyperizons* at `http://www.duke.edu/~mshumate/hyperfic.html`).

initial expectations. There is Eastgate Fiction[6], publisher and distributor of "quality hyperfiction", there are class projects at Brown[7] and other creative writing classes in an academic context, there are a number of single-author hyperfictions as well as collaborative projects on the WWW, but the breakthrough into mass-consciousness has not yet happened and so far electronic fiction has been widely ignored by bookshops and libraries[8]. Sales of CD-ROMs are going down, and even those publishers, like for example Penguin, who initially ventured into electronic fiction for a while, are slowly retreating from the market[9].

1.2: From Page to Screen: Print Text vs. Electronic Text

The impact of the writing technologies on the writing process has been subject to extensive research, most notably the work of Walter Ong and Elizabeth Eisenstein[10], who both argue that developments in writing technologies (Eisenstein focuses on the printing press) have a strong influence not only on literacy, but also on thinking patterns of individuals and societies. Similar arguments have been brought forward by scholars interested in electronic text[11], who regard the shift from print to electronic text as being of similar, if not greater,[12] importance than Gutenberg's invention of the movable letter press 500 years ago.

The first question to tackle is whether, and in what way, reading and writing in an

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[6] `http://www.eastgate.com`

[7] `http://duke.cs.brown.edu/`

[8] This is partly for reasons of infrastructure. Libraries have, however, shown a great interest in electronic text storage and - with the help of substantial government funding - have set up the *elib* (electronic libraries) scheme that is currently exploring the issue from a variety of angles.

[9] See: Steve Shipside, "Death of the Disk?", *The Guardian OnLine*, 17 October 1996.

[10] Walter J. Ong, *Orality and Literacy* (London and New York: Methuen,1982) and Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe* (Cambridge: Cambridge University Press, 1980).

[11] Among them David Jay Bolter's *Writing Space* and Richard E. Lanham's *The Electronic Word.*

[12] Roger Chartier, for example, argues in his recent book *Forms and Meanings:* that even Gutenberg's 'revolutionary' invention of the printing press has to be considered again in the light of electronic media, because

> [i]t is now clear that Gutenberg's invention did not alter the essential structures of the book. [...] After Gutenberg as before, the book continued to be an object composed of folded sheets, gathered between covers and bound together. The Western book achieved the form it would retain in print culture twelve to thirteen centuries before the introduction of the new technology.

Roger Chartier, *Forms and Meanings: Texts Performances and Audiences form Codex to Computer* (Philadelphia, PA: University of Pennsylvania Press, 1996), p.14.
for a review see: Daniel Riess, "The Revolution May Not Be Computerized", ebr - *Electronic Book Review*, no.2, (electronic journal) at: `http://www.altx.com/ebr/ebr2.riess.html` (28/8/1996).

electronic environment differ from print. Could it not be argued that the mental reading and writing processes are independent from their physical realisations and only marginally affected by the physical reality of the resulting text? After all, a shift from print to digital text does not change the paradigm of expression; despite the change in the technology of writing, the mode of representation is still text, unlike other technological developments, most notably film and TV or, more recently, Virtual Reality, which replace a mediated text-representation by a seemingly unmediated visual immediacy. However, while it may be useful to distinguish the mental writing processes from the actual physical act of writing in order to examine the cognitive processes of the former in their complexity, one does have to acknowledge that the physicalities of different writing and reading media in which these cognitive processes are taking place do profoundly influence them and have to be taken into account.

Writing in different media

Writing on material like stone (which is extremely hard work and where it is impossible to correct mistakes or change the text) requires very careful planning and the actual writing process, the externalisation of thoughts, is only the last stage at the end of a nearly complete internalised mental writing process. The less labour-intensive, the less precious the material used and the more effortless changes can be made (i.e. with material like papyrus compared to stone, or paper compared to papyrus), the more the actual physical writing shifts forward and may blend with the mental writing process.

The computer has further supported this development and for most users of word processing programs writing habits have changed so that the actual writing coincides to a large extent with the mental writing process. Thoughts can be written down immediately, and then changed, moved around, expanded and deleted infinitely and with great ease. With the actual writing starting earlier and the computer allowing for greater flexibility, the feeling of "completeness" gets increasingly deferred. "As inscribed clay tablets dried, the writer in ancient times had to feel the work was complete. In contrast, a writer who is using a computer tends to feel that the process is

ongoing" observes Colette Daiute[13]. It is interesting that she notes that writers in stone "had to feel" this completeness, since often enough, as most people will have experienced, the end of the writing process, the 'final version' of a text is not arrived at by the writer's choice, but imposed upon him/her by material circumstances.

A similar involuntary finality can also apply to computer writing. Word processing that still has the printed page as an end result in mind does not employ the full potential of electronic text, but uses the computer as a "turbo-charged typewriter"[14], a convenient tool to produce print texts. In this case, an end will inevitably be put to the flexible writing process, and after a number of drafts a final version will be produced, rendering all previous versions obsolete and all future versions only potential possibilities. The private composition process is followed by a stage where the result is made public, i.e. printed and fixed.

> *I mean first of all to distinguish hypertext from word processing and desktop publishing, which to my mind remain simple extensions of the typewriter and the printing press, despite their impact on the practice of writing. (John Slatin)*[15]

The real impact of electronic writing can only be fully appreciated if one perceives the computer not only as a tool to facilitate the production of print text, but as a textual medium in its own right. If texts are not only written, but also distributed in digital form and read on the computer, the externalisation of the mental writing processes and the making public of texts does not have to set an end to their flexibility. It is then that authors and readers can make use of some of the distinguishing features of electronic writing, amongst them the possibility of hypertext.

Paper-based and digital text can be contrasted in a series of oppositional pairs, which,

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[13] Colette Daiute, *Writing and Computers* (Reading, MA.: Addison-Wesley, 1985), p.66.
It is interesting to note that, while for the author a sense of permanent incompleteness prevails, the opposite effect can be true for the reader. The electronic text looks complete and finished at any time, is always a pure form, a clean copy without the margin notes and the handwritten corrections which are the tell-tale signs of the unfinished manuscript in progress.

[14] Myron Tuman, *Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.2.

[15] John M.Slatin, "Composing Hypertext: A Discussion for Writing Teachers", in: *Hypertext / Hypermedia Handbook*, ed.by Emily Berk and Joseph Devlin (New York: Intertext Publications / MacGraw Hill, 1991), pp.55-65 (p.55).

though distinctly different from each other, do not necessarily represent advantages or disadvantages on either side, and affect both the writing and the reading process:

	Print	**eText**
a)	stability	flexibility
b)	presence	absence
c)	closure	open-endedness
d)	instantly graspable	need for mechanical translation
e)	individual possession	shared ownership

Unlike a print text, which is always physically present in its entirety, the electronic text resides in the computer memory in a format not accessible to us, and is only temporarily realised on the screen. It is not transparent, i.e. not immediately understandable, we are dependent on the computer to translate it into a form accessible to us. This is symptomatic of the increasingly technological environment and our dependency on mediating machines in the late 20th century society, which has been described by Douglas Cooper in his introduction to the programming language Pascal as follows:

> Once upon a time, it was possible to figure out what something did by inspecting it. That's because the final product usually relied on the everyday properties of the wood, metal, fabric it was build of. A catapult, a loom, a printing press - it didn't matter, because there was a visible connection between the parts of the machine and what the machine did. It was, as Kenner puts it, the age of 'transparent technology, when machines were visual guides to their own working.'[16]

The computer "dematerialises" written trace (as opposed to pen, typewriter, print), but also "depersonalises" it . The author's self, that is constructed in a written text in physical stability and imagined autonomy, becomes destabilised and dispersed in the electronic text. Similarly, at the receiving end, the construct of the reader becomes less graspable in a text with unstable boundaries and impermanent status.[17] An electronic text can be duplicated at nearly no cost an infinite number of times - overturning notions of rarity, individual possession as well as originality. Mark Poster argues:

> Compare a novel written on a computer and stored on a floppy disk with one composed in a manuscript or even a typescript. Manuscripts have value as originals.

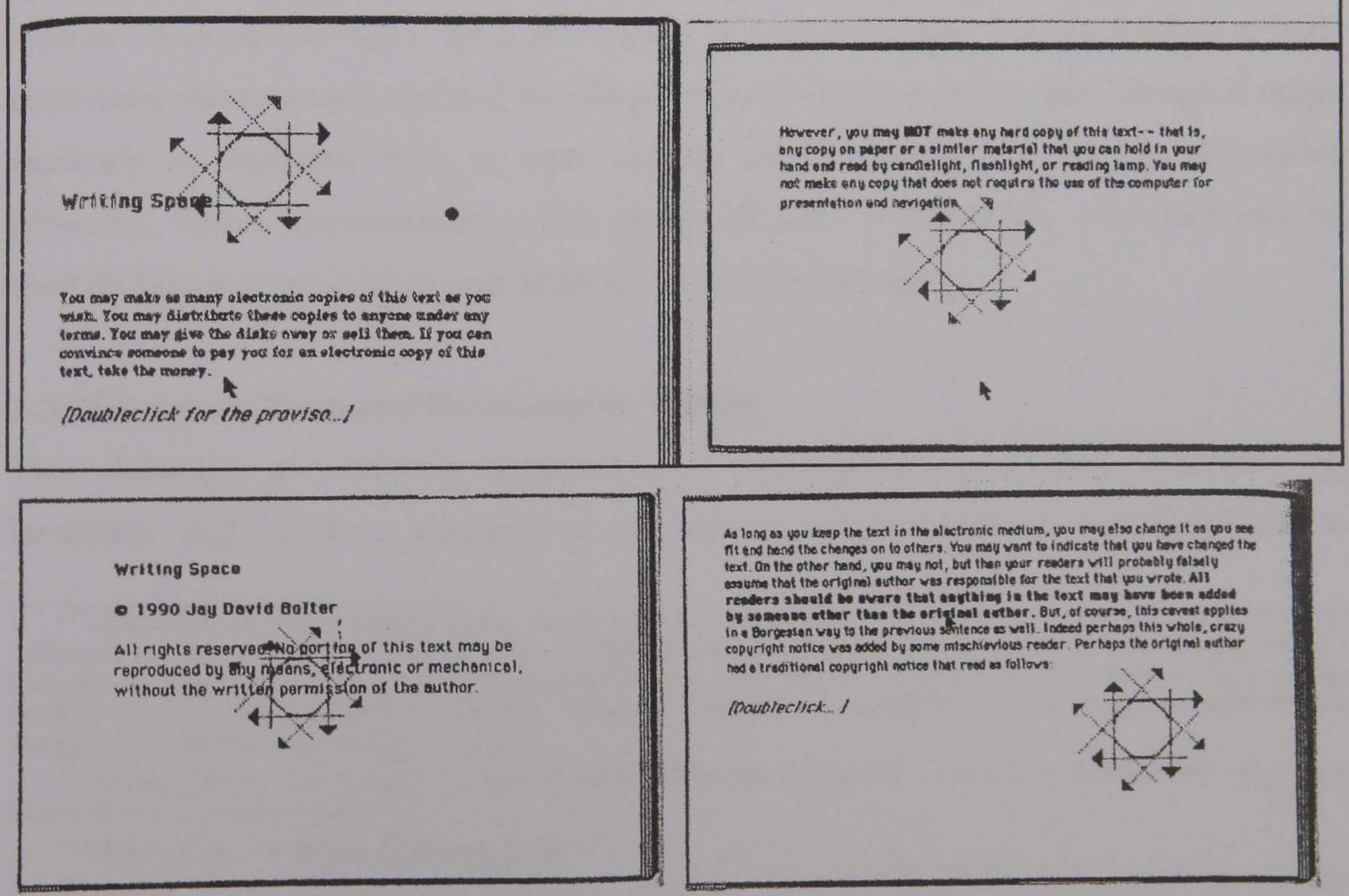
[16] Douglas Cooper, *Oh! Pascal!*, 3rd edition (New York and London, W.W.Norton, 1993), p. XXI (referring to Hugh Kenner's *The Mechanical Muse* (Oxford, OUP, 1987)).

[17] see: Mark Poster, *The Mode of Information* (Chicago: University of Chicago Press, 1990), p.6, and Lanham, *The Electronic Word*, p.11.

Students and scholars consult them in the hope of getting closer to the author's intention, of finding in them the "true" text or of discovering the evolution of the text.[18]

Not only is an electronic text a constant work-in-progress which can be undergoing changes by the author; unlike print, where comments in the form of marginal notes or any other form remain outside the text and in hierarchical terms inferior to the original (as well as limited to one individual copy of the text), reader's alternations or expansions can also be seamlessly incorporated into the text, thereby undermining notions of textual authority and integrity.

Jane Y. Douglas describes an interesting example of an electronic text that plays with this consciously and cites the first four opening screens of the hypertext version of Jay David Bolter's *Writing Space*, already mentioned above as one of the earlier in-depth studies of the computer as a writing medium and published both in print as well as on floppy disk.[19]



[18] Poster, *The Mode of Information*, p.111.

[19] Jane Yellowless Douglas, "Where the Senses Become a Stage and Reading Is Direction: Performing the Texts of Virtual Reality and Interactive Fiction", *The Drama Review*, vol.37 no.4 (Winter 1993), 18-37.

What on the first two screens appears to be a perfectly reasonable copyright notice, similar to the conventional format but adapted to the new medium, experiences an unexpected twist in the third and fourth screen. Who is the author of either of these copyright notices? Which is the official one? Which one has the greater authority? With any print text the author can never anticipate how his/her writing will be interpreted by readers, readings create meanings far beyond the author's intention. But they can usually be sure that the text reaches the reader only indirectly[20] affected by other readings.

Critics associated with hermeneutics and reception theory have always argued against a concept of a stable text and have warned about the illusion of objectivity and authority of print texts. Stanley Fish is one example - he states that:

> [t]he objectivity of the text is an illusion, and moreover a dangerous illusion, because it is so physically convincing. [...] A line of print on a page or a book is so obviously there, it can be handled, photographed, or put away, that it seems to be the sole repository of whatever value and meaning we associate with it.[21]

This belief in an original, an ur-text behind the copies, an authorative version, is directly shaken by electronic texts. As is the notion of textual integrity, of the work as a "self-contained, discrete unit, defined by closure"[22], upheld by the book that, though it might explicitly or implicitly refer to texts outside itself, remains a physically monolithic presence, where intertextuality is less graspable than in electronic texts that can be directly linked to each other and seem to connect seamlessly[23].

1.3: Electronic Text and Postmodern Theory

This doubting of authority, questioning of presupposed certainties, emphasis on instability and absence, element of playfulness, self-referentiality and invitation to

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[20] Indirectly in three senses: other readings and commentary form part of a context of a text and influence readers attitudes towards and readings of a text before s/he has even read it, margin notes / underlining (though, as mentioned above, perceived as of inferior status) have an influence during the reading process, and for edited text, the selection and order that people other than the author had, change the material accordingly.

[21] Stanley Fish, "Literature in the Reader: Affective Stylistics", *New Literary History,* vol.2, no.1 (Autumn 1970), pp.123-162, p.140.

[22] Walter Ong, *Orality and Literacy*, p.148.

[23] Myron Tuman asks the very interesting question about the desirability of such a concept. He argues that the notion of the instability of text resembles an Orwellian scenario of fluid fact and knowledge and ultimately personal histories and identities of 1984, that can be constructed, altered and destroyed at whim, and that represent neither a positive nor neutral development, but can be exploited and should be considered carefully. (Tuman, *Word Perfect*, pp. 8-10.). For a discussion of intertextuality see chapter 2.

participation are features similar to those generally associated with postmodern theory and writing. It would be too great a task to define postmodernism - a concept inherently defying simplified definitions - in this short space. A number of studies on the subject suggest both definitions and schemes to organise the array of different styles and elements of "postmodern writing". Sharon Spencer and Derek Malmgren emphasise the use of spatial metaphors, Elizabeth Dipple, Patricia Waugh in *Metafiction* and Linda Hutcheon in *Narcissistic Narratives* stress the predominance of self-referential or metafiction (or, Surfiction, as Raymond Federman prefers to call it) over mimesis. Brian McHale argues that the shift from modernity to postmodernity represents a shift from an epistemological to an ontological world view and poetics and traces this concept in a variety of different textual strategies[24]. Ihab Hassan's attempts in his essay "Toward a Concept of Postmodernism"[25] to define Postmodernism in keywords against the background of Modernism are on one hand rather reductive (especially because of its use of oppositional pairs) but at the same time nevertheless comprehensive and on the whole appropriate, and I would like to reproduce a few of the items on his list here.

Modernism	**Postmodernism**
Purpose	Play
Design	Change
Hierarchy	Anarchy
Art Object / Finished Work	Process / Performance / Happening
Distance	Participation
Presence	Absence
Centring	Dispersal
Genre / Boundary	Text / Intertext
Selection	Combination

[24] Elizabeth Dipple, *The Unresolvable Plot: Reading Contemporary Fiction* (New York and London: Routledge, 1988); Carl Darryl Malmgren, *Fictional Space in the Modernist and Postmodernist American Novel* (Lewisburg: Bucknell University Press, 1985); Brian McHale, *Postmodernist Fiction* (New York and London: Routledge, 1987); Patricia Waugh, *Metafiction: The Theory and Practice of Self-Conscious Fiction* (London: Routledge, 1984). Linda Hutcheon, *Narcissistic Narrative: The Metafictional Paradox* (New York and London: Methuen, 1984); Raymond Federman (ed.), *Surfiction: Fiction Now...and Tomorrow* (Chicago: The Swallow Press, 1975).

[25] in: Ihab Hassan, *The Postmodern Turn: Essays in Postmodern Theory and Culture* (Ohio State University Press: 1987), pp.84-96 (pp.91/2); other studies on the concept of postmodernism include: McHale, Brian, *Postmodernist Fiction* (New York and London: Routledge, 1987) and *Constructing Postmodernism* (London and New York: Routledge,1992); Calinescu, Matei, *Five Face of Modernity: Modernism, Avant-garde, Decadence, Kitsch, Postmodernism* (Durham: Duke University Press, 1987).

Signified	Signifier
Determinacy	Indeterminacy

There can be no doubt that a clear-cut opposition of electronic text versus print text is as much of a simplification (and to some extent fabrication) as the above opposition of modernism and postmodernism, but it can serve to highlight the debates around textuality that the advent of computer technology has triggered and the way in which it has, on a practical level taken up ideas and concepts of text that have theoretically been under debate for a number of years in literary theory.

This is not to say that there is a simple equation between print = modernism and etext = postmodernism, for the latter developed in print and often against print and many e-text uses extremely conventional features. But it is not surprising that these parallels have been picked up and that it has been argued not that postmodernism is only possible in electronic text or that etexts are inherently postmodern, but that the computer could be the more appropriate medium to express and implement postmodern textuality.These 'postmodern characteristics' of electronic writing are especially apparent in the form of text that, as well as its underlying concept, is known as *hypertext*. Hypertext is not only for purely technical reasons in the focus of attention. The characteristics of digital text and the concept of hypertext appeal to both authors of factual texts (such as teaching materials, up-to-date information etc.) as well as of literature, albeit for different reasons.

1.4: Hypertext

1.4.1: The History of Hypertext[26] and Hypertext Programs

> *A hypertext is not a closed work but an open fabric of heterogeneous traces and associations that are in a process of constant revision and supplementation. The structure of a hypertext is not fixed but is forever shifting and always mobile. The interplay of surface and depth gives way to a perpetual displacement of surfaces that is anything but superficial.[...]There is no clearly defined preestablished path through the proliferating layers of a hypertext. Through the network is shared, the course each individual follows is different. Thus, no hypertext is the product of a single author who is its creative origin or heroic architect. To the contrary in the hypertextual network, all authorship is joint authorship and all production is co-production. Every writer is a reader and all reading is writing. While sometimes printed on a page, the*

[26] For a concise timeline of the 'History of Hypertext' see: http: www.sun.com/950523/columns/alertbox/history.html (3/11/96).

In the opening quote, Michael Heim asks questions about the revolutionary potential of electronic writing. This element of newness, of break with tradition, of a new start after 500 relatively stable years of print has been the dominant emphasis of hypertext and hyperfiction criticism. But new artforms do not appear out of a vacuum, independently of what happened before. They rely on materials previously available, are based on traditions (whether they expand them or reject them) as well as being produced by an artist and received by an audience inescapably rooted in a set of conventions and expectations formed by previous (reading) experience. The absolute new does not exist.

Hyperfiction draws on a number of traditions and influences. First of all, developments in computer technology. The ability to realise a hypertext in electronic format has only existed for about two decades, which does give the overwhelming impression of being a new artform. And indeed, many features of hypertext (fiction) are unfamiliar. Its distribution is different from print: traditional channels such as bookshops and libraries are often not equipped for the new format, which leaves mail order or downloading from computer networks. They are also texts that seem to require explanation: whereas experimental, (post-)modern texts, as Christopher Butler argues[41], require a theoretical framework to be accessible, hypertext fictions occasionally come not only with instructions on how to understand them, but on how to read them.

> *Hypertext is a new medium [...] because it is intimately tied to the computer; the true hypertext or hyperdocument exists and can exist only on-line, and has no meaningful existence in print.[42] (John Slatin).*

While postmodern <u>theory</u> is widely acknowledged as a second main influence on hyperfiction, as the subtitle to George P. Landow's influential hypertext study "the

[41] Christopher Butler, *After the Wake: An Essay on the Contemporary Avant-Garde* (Oxford: Clarendon Press, 1980).

[42] John M. Slatin, "Composing Hypertext: A Discussion for Writing Teachers", in: *Hypertext / Hypermedia Handbook,* ed.by Emily Berk and Joseph Devlin (New York: Intertext Publications / MacGraw Hill, 1991), pp.55-65 (p.55).

medium of the hypertext is essentially electronic. (Taylor / Saarinen)[27]

Digitalised text can have many different forms: a simple conversion of printed text into electronic text or extended texts that include graphics, search-facilities, directly accessible footnotes as well as other secondary material. One of the most far reaching, and most debated, is the storage of text in hypertext format. Hypertext is a term first coined thirty years ago by Ted Nelson, a computer scientist, who described it as:

> non-sequential writing - text that branches and allows choice to the reader, best read at an interactive screen. As popularly conceived, this is a series of text chunks connected by links which offer the reader different pathways.[28]

and at other places as "text seen in a new way, a new kind of text"[29] and in Robert Coover's influential article on Hypertext Fiction as "offering a network of alternate paths through a set of text spaces by way of designated links"[30]

A typical hypertext document consists of two elements, generally referred to as "nodes"[31], i.e. discrete text elements and the "links", connections between different nodes or between part of them. Each node can be starting and end point for a number of links, therefore incorporating it into a potentially very complex and large network. While the term hypermedia is occasionally used to distinguish purely textual applications (hypertext) from networks that include other media (hypermedia), I would like to argue for an all-inclusive definition of hypertext, that is predominantly textual but also includes images and sound and will use the term to include text with multimedia elements.

The term hypertext is used to describe at least two things: the general concept of

[27] Mark C. Taylor and Esa Saarinen , *Imagologies: Media Philosophy* (New York: Routledge, 1993) , no page numbers.

[28] Theodor Nelson, quoted in Landow, *Hypertext*, p.4.

[29] Charles Deemer, "*What is Hypertext*", at: `http://www.teleport.com/~cdeemer/essay.html` (7/8/97).

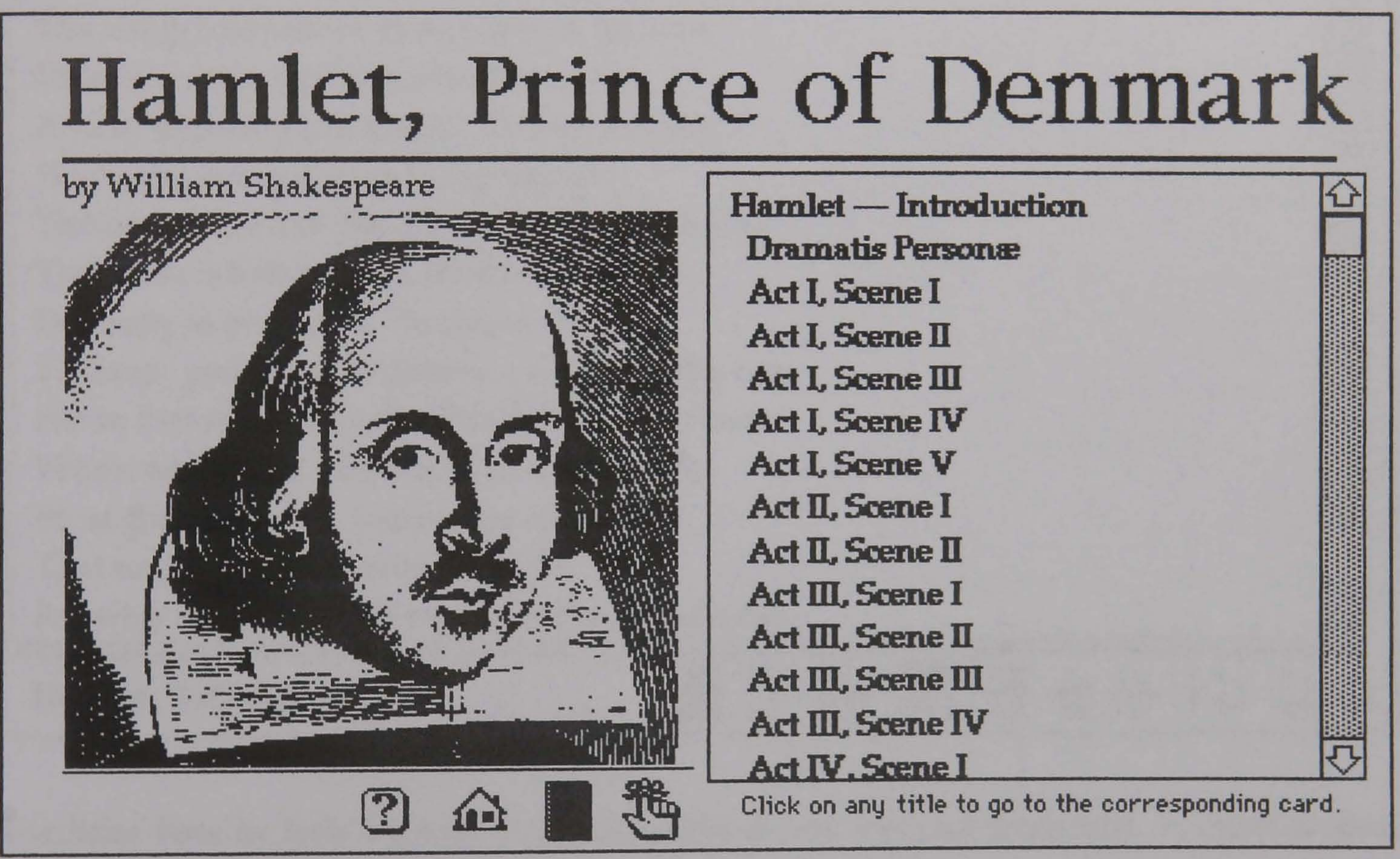
[30] Robert Coover, "The End of Books", *New York Times Book Review*, 21 June 1992, p.1.

[31] Other terms have been suggested. George P. Landow uses "lexia" in reference to Roland Barthes' use of the term in *S/Z* (Landow, *Hypertext*,p.4); Espen J.Aarseth, who rejects 'lexia' because of Barthes' emphasis on seriality (*fragments contigu*) suggests 'texton' or 'scripton' ("Nonlinearity and Literary Theory", in: *Hyper/Text/Theory*, ed.by George P. Landow (Baltimore, MA: Johns Hopkins University Press, 1994, pp.51-87, p.61). Conner argues similarly that 'lexia' gives the impression of a complete text deconstructed into smaller units, rather than regarding hypertext as "constructs which may or may not chose to exploit one or more strategies for giving the text some sequential properties." (Patrick W. Conner, "Hypertext in the Last Days of the Book", *Bulletin of the John Rylands University Library of Manchester*, vol.74, no.3 (Autumn 1992) 7-24. (p. 9)). I will adopt the terminology of 'nodes' and 'links', that, though it lacks the direct connections to literary theory and textuality, is most commonly used in hypertext research.

fragmented text in a non-sequential nodes and links network, and secondly the practical implementations of this concept, be it in the form of hypertext software (some of which will be described below) or the individual hypertexts created in these environments.

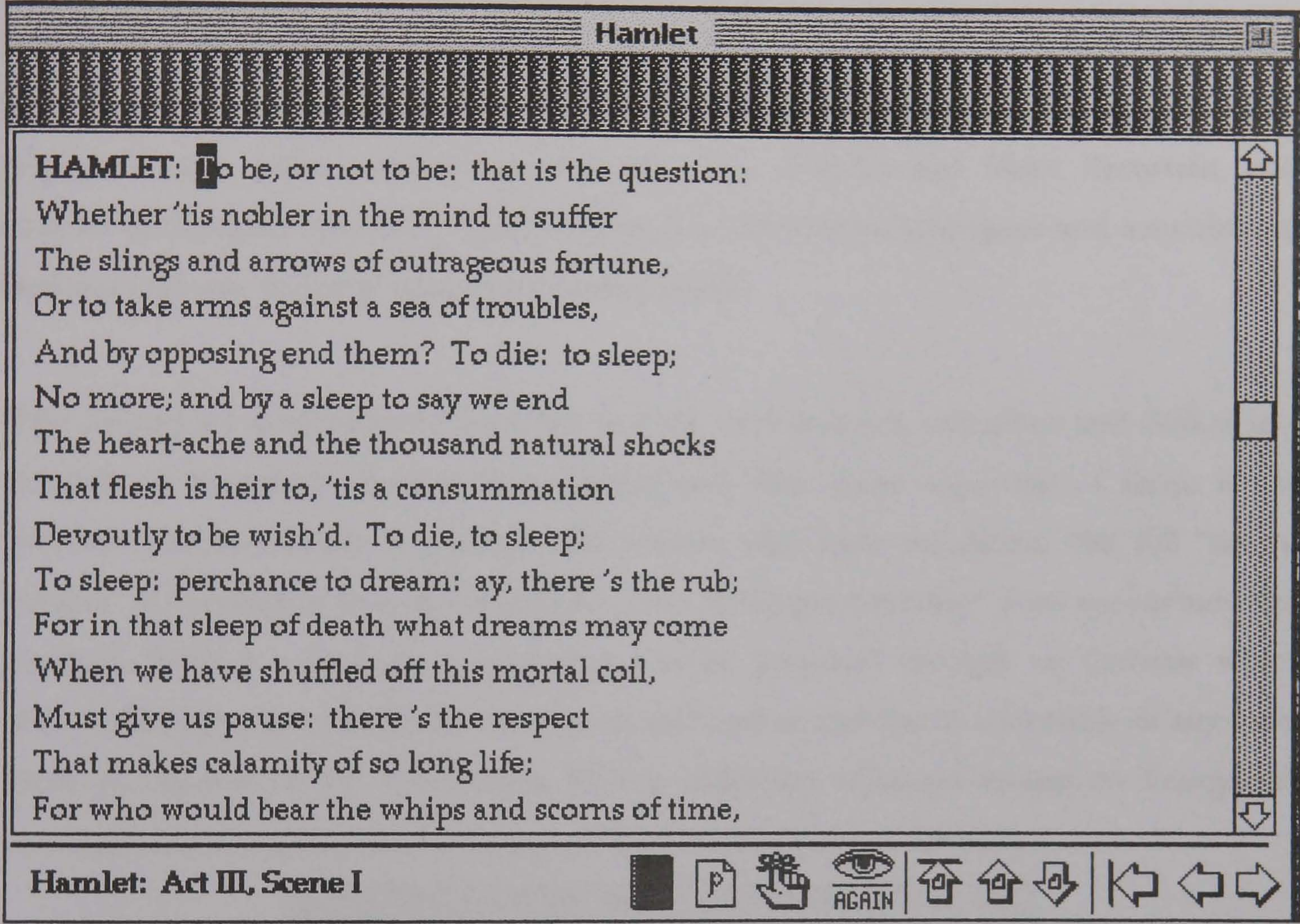
There are currently a number of different computer applications to create hypertexts available that, though sharing the basic node and link principle, differ in the exact implementation of the hypertext concept and emphasise different characteristics. The three most-commonly used, though a number of others are available, are HyperCard, Storyspace and the WWW.

1.4.2: HyperCard



Distributed between 1987 and 1995 on all new Apple computers, HyperCard helped to make the term hypertext widely known and hypertext systems widely available. It is based on notecards; text (as well as images, sound and video) is stored on separate notecards which are grouped together into stacks and can be cross-referenced. The typical card will contain text and images; arrow-buttons allow the reader to move successively through the cards, and links within the text jump directly to other cards in the document.

In the above example of a HyperCard version of *Hamlet,* freely distributed as shareware[32], a mouse-click on any of the scenes on the right leads to its text, clicking on the small icons along the bottom would (from left to right) jump to a help file, back to the homecard of the user, open a note-taking facility (a blank box which can be filled with up to 30k of text) and lastly a bookmarking facility. Click on Act 3 Scene One and you will see:



Facilities here include buttons to print out the scene (second from left), to move around within the scene-stack (middle arrow) and within the whole text. Clicking on the eye-icon will allow to find any word or phrase in the text.

There are many advantages to HyperCard: It uses a familiar notecards metaphor; it is easy to create simple applications, but it is also possible to create more complex applications with the help of relatively easy to learn scripting language, Hyperttalk. On the downside it lacks an overview function. It has the "Homecard", the first and main card in the stack,

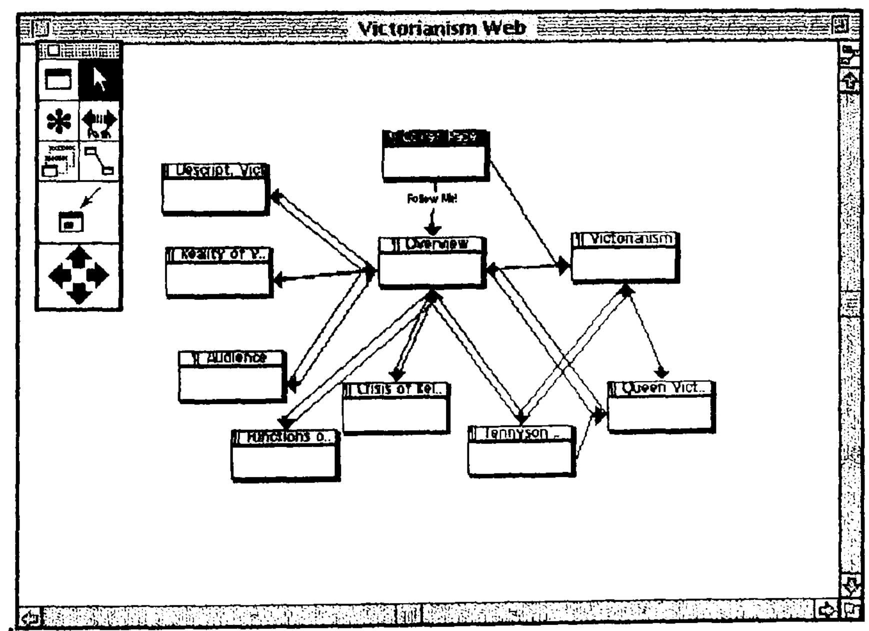
[32] I found this example on the *MacFormat* Cover CD-ROM, February 1997.

to which it is possible to return from any point in the text, but it can nevertheless be difficult to manoeuvre around. Also, the user is restricted to fixed card sizes.Intended for applications such as address books or to keep track of collections it has been used by fiction writers - most notably John McDaid's *Uncle Buddy's Phantom Funhouse*[33] , which will be discussed further in a later chapters.

1.4.3: Storyspace

Storyspace is a hypertext writing environment developed by Jay David Bolter, Michael Joyce (both outspoken hypertext enthusiasts, authors of a number of critical essays and, in Joyce's case, some seminal hyperfiction), John B.Smith and Mark Bernstein, the founder of Eastgate Systems[34] , the company that distributes Storyspace and a number of fictional and non-fictional hypertexts commercially.

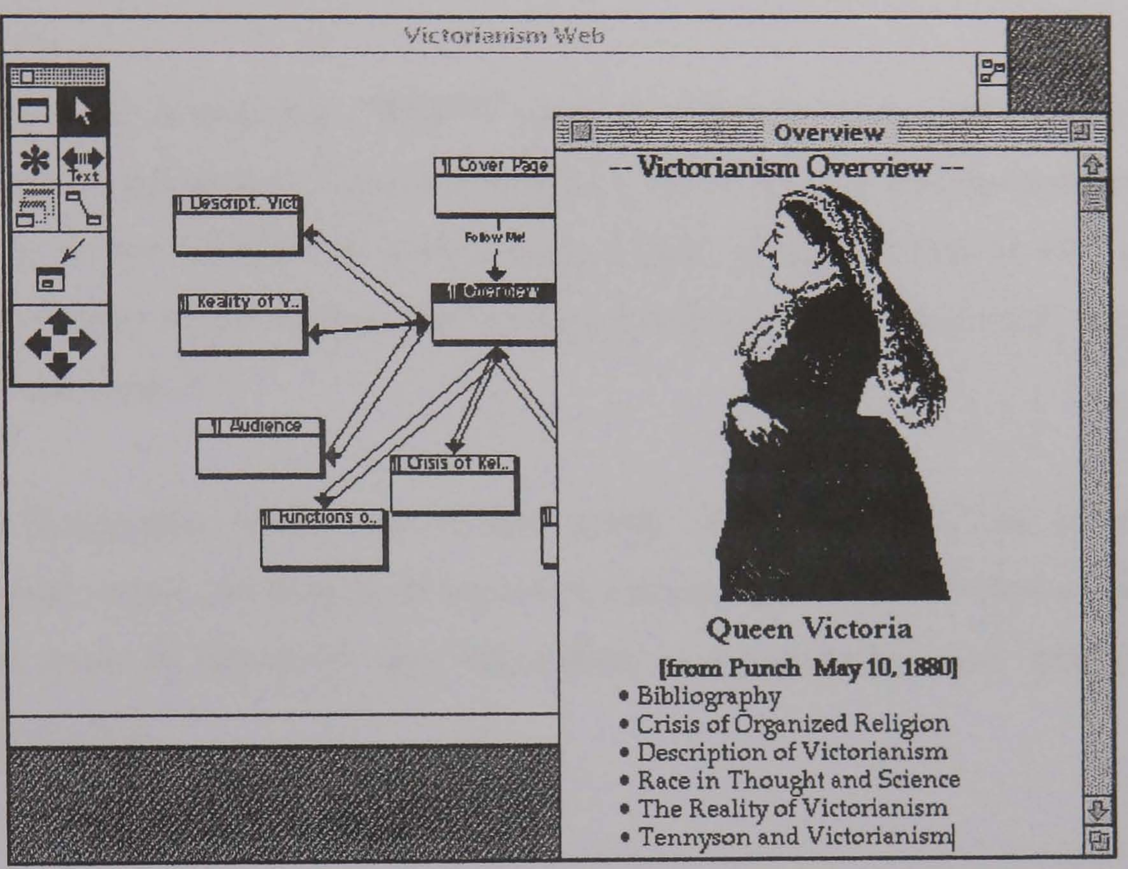
The Storyspace environment does not use the card-in-stack metaphor and differs in a number of important features from HyperCard. The most important of these is the overview feature, which is available for readers who have purchased the full "author version" of Storyspace (the rather simpler, free "Storyspace Reader" does not include this feature). With it a Storyspace hypertext can be accessed through an overview which shows available nodes and their relation to each other and that is accessible at any time. Here an excerpt of the *Victorianism Web*, a collection of essays related to Tennyson's work created by a group led by George P. Landow at Brown University.



[33] John McDaid, *Uncle Buddy's Phantom Funhouse, a hypermedia novel,* (Cambridge, MA: Eastgate Systems, 1992).

[34] *Getting Started with Storyspace for Macintosh* TM, Software manual for the Storyspace software, by Jay David Bolter, Michael Joyce, John B. Smith and Mark Bernstein (Watertown, MA: Eastgate Systems 1994).

The tool-palette on the left contains tools to manoeuvre through the text as well as tools to create links and annotate text nodes. Double-clicking any of the title bars will open the node - selecting the node entitled "Overview", for example, will open the following in a separate window:



The reader can then either follow links from this node (which are embedded in the text, in this case most of the bullet points), or go back to the initial network overview and choose to open another starting point. The obvious advantage of this overview feature is that it helps to grasp the network as a whole and facilitates orientation. Through careful naming of nodes, the much debated "Lost in Hyperspace" (see chapter 2) problem, of readers losing the sense of the structure and the connections within the network, can be eased. Storyspace is the system of choice for a number of hypertext fictions, many of them use the complex features specific to Storyspace to create very complex and multidimensional hypertexts.

1.4.4:.The World Wide Web

The network most commonly associated with hypertext that has also attracted the most attention is the World Wide Web (WWW). Part of the internet, the world-wide computer network, it consists of a large number of "pages" of information created by

different authors stored on networked computers. Unlike HyperCard and Storyspace applications, that are relatively small and discrete and created by one or a small number of collaborating authors, the WWW consist of millions of documents created independently and then linked.

Accessing as well as creating WWW-pages is relatively easy, which is one of the explanations for its popularity. There are, however, due to its size and the technical setup, disadvantages to the WWW. It suffers from a lack of organisation as well as from a certain inflexibility; while readers can access a web page and link to it, they cannot change it or link from it.

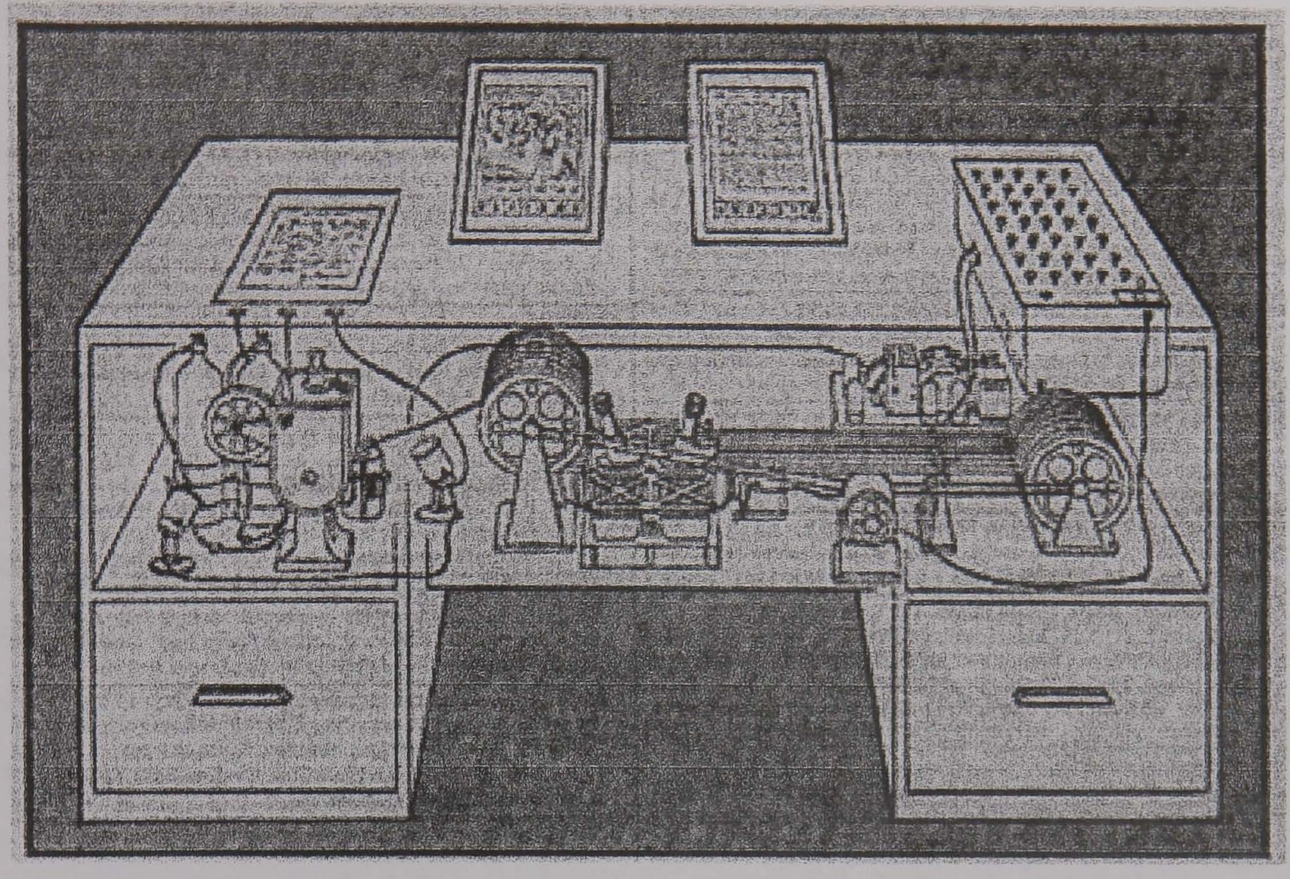
Apart from Storyspace, which was at least partly designed with a use for Hypertext Fiction in mind, most developers of hypertext systems do not see fiction writing as one of the main areas of hypertext use, but rather as a convenient and intuitive way to organise factual data.

1.5: From 'Mode of Production' to 'Mode of Information'

In *The Mode of Information* Mark Poster proposes that we live in what he calls an "information society"; we are experiencing a shift from a 'mode of production' to a 'mode of information', where no longer access to and ownership of production technologies but the access to and possession of information is one of the main commodities[35]. Throughout the twentieth century this body of information has been growing and changing constantly at a speed that has left individuals with a feeling of alienation and the perception that the world that surrounds them is too complex and multifaceted for any one to comprehend fully. The immense technological developments are a contributing factor to this, while at the same time they raise the hope that they can be used somehow to organise the information overflow of which they are part.

[35] Poster, *Mode of Information,* p.16.

This is the background against which Vannevar Bush conceived in 1945 his Memex[36],



an early, mechanical 'hypertext-machine', that would make accessible large amounts of information on microfilm and, more importantly, let readers build up trails of related information relevant to them. As Bush realised, the problem was not the availability of information but the accessibility of it, and his Memex (short for **mem**ory **ex**tension) was intended to organise the "growing mountain of research" in a way relevant to the individual user while allowing him/her to ignore the unessentials. It is not surprising that most histories of hypertext begin with Bush's machine: it was never built, but the two key concepts of <u>information collection</u> and <u>personalised access</u> are still present in current computerised hypertext.

> *Information is by nature timebound. Supported by technical systems, information depends on revision and updating. (Michael Heim)*[37]

Hypertext is a suitable way to organise, manage and constantly update large bodies of interlinked information with such an ease that constant actuality and permanent change

[36] described in Vannevar Bush "As We May Think", *Atlantic Monthly*, vol.176 no.1 (July 1945) 101-108, or at: `http://www.isg.sfu.ca/~duchier/misc/vbush`; for an animated demonstration see: `http://www.dynamicdiagrams.com/design/memex/opening.htm`.

[37] Michael Heim, *The Metaphysics of Virtual Reality* (Oxford: Oxford University Press, 1993), p.26.

have become more and more important and constant and fast up-dating is seen as necessity in modern information society.

Where does that leave literature? Fictional texts are by nature less timebound; they have value and relevance beyond their immediate context. Unlike factual information and scientific data, which are frequently superseded by new discoveries and developments and need to be constantly updated, ideas in the humanities in general and literature specifically accumulate, so that alternative, contradictory trains of thought can co-exist in parallel. Writers of hypertext fiction therefore do not use hypertext as the organising principle through which it came into existence. On the contrary, they exploit the parallels outlined above between characteristics of electronic text and postmodern features, to use hypertext not only as a way to organise text, but to subvert organisation and not only to express the 'condition of postmodernity', but somehow to supersede it: to be an "authentic yet functional postmodern form"[38] that could overcome what David Harvey calls the "crisis of representation"[39], and replace the exhaustion of postmodern literature with a medium more appropriate to express the fragmentation, contradiction, instability and absence of meta-narratives that define contemporary life.

But can it? And is it truly a new project? Could it not be argued that the use of a new medium only hides the fact that it repeats what has been attempted in experimental writing throughout the century and beyond?

1.6: Revolution vs. Evolution

> *In fact, no one ever really witnesses cases of total radical invention, nor indeed of total moderate invention, since texts are maze-like structures combining invention, replicas, stylizations, ostentions, and so on. Semiosis never rises ex novo and ex nihilo. No new culture can ever come into being except against the background of an old one. (Umberto Eco)*[40]

[38]Paul Roberts, "The Future of Writing", *Independent on Sunday*, 29 September 1996, pp.11-14. Stuart Moulthrop argues similarly in his essay "Hypertext and the Hyperreal": "Hypertext systems appear as the *practical implementation* of a conceptual movement that coincides with the late phase of modernity" (my italics; Stuart Moulthrop, "Hypertext and 'the Hyperreal'", *ACM Hypertext '89 Proceedings* (New York: The Association for Computer Machinery, 1989), 259-266 (p.259).

[39] David Harvey, *The Condition of Postmodernity* (Oxford: Blackwell, 1989), p.262.

[40] Umberto Eco, *A Theory of Semiotics*, quoted in Carl Darryl Malmgren, *Fictional Space in the Modernist and Postmodernist American Novel* (Lewisburg: Bucknell University Press, 1985), p.158.

convergence of technology and literary theory" suggests and the references to Barthes[43] and Derrida in works of Moulthrop and Bolter prove, the fictional texts of postmodern writing, authors such as Borges, Calvino, the OuLiPo-group or B.S.Johnson, are widely neglected.

This is surprising, since most hyperfiction writing comes out of academia, written or taught by academics or students trained not only in literary theory but also familiar with the tradition of 20th century experimental writing. But at the same time it is a logical consequence of the thought which is dominant in Slatin's quote and which puts hypertext solely into the realm of computer technology. While it leads to an appropriation of the theoretical background that appears suitable for hypertext, it excludes the possibility to acknowledge other (printed) literary experiments as a part of the tradition of hypertext fiction.

The technology to implement hypertexts is recent, which tends to obscure other influences. The concept hypertext, small separate but cross-connected units of text, is not new and has been attempted in print with the help of indices, cross-references, footnotes etc., most notably in encyclopaedias. But is is not only in factual texts where one can find hypertextual ideas in a print based text. Many a print novel works towards a hypertext format and key terms generally associated with electronic hypertexts such as non-linearity, fragmentation and interactivity have been a major element of 20th century fiction. It is this literary tradition which, if acknowledged at all as proto-hypertext in hyperfiction research, is rejected as unsuccessful and unsatisfactory.

> Hypertextual fictions can be produced in print [...]. but such efforts are less interesting than their electronic counterparts for two reasons: first, they entail an arduous process of page-flicking, reinforcing the sense that alternative narrative sequences violate the primary order of the work; second, any printed narrative is

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[43] Especially Roland Barthes' work and his idea of the writerly text have often been referred to in connection with hypertext - as if Barthes were "a kind of Nostradamus of literary theory" (Andy Cameron, *Dissimulations* , no page numbers) and hypertext the embodiment of Barthes' ideal text.

> In this ideal text, the networks are many and interact, without any of them being able to surpass the rest; this text is a galaxy of signifiers, not a structure of signifieds; it has no beginning, it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be he main one; the codes it mobilizes extend as far as the eye can see. (Barthes, *S/Z,* quoted by Cameron)

I regard this direct connection as an extremely simplifying strategy. To appropriate Barthes' theories this directly and literally is a limited interpretation of the complexities of postmodern theories, which in describing an "ideal text" are not merely concerned with a physical structure of writing and are aware of the impossibilities of ever achieving this text and never intended a physical realisation in any form.

materially and formally closed in ways that electronic texts are not.[44]

An argument similar to the above by Stuart Moulthrop is brought forward by Jane Yellowlees Douglas in her doctoral dissertation on hypertext fiction. Referring to authors such as Sterne, Joyce, Borges and Cortazar, she calls them "difficult" writers and explains:

> What makes them difficult writers [....] is their self-conscious absorption with the act of writing itself and the difficult relationship between narrator, text and reader, because their print texts all work strenuously - and ultimately unsuccessfully - against the medium in which they were conceived.[45]

Rejection of predecessors and traditions is a common feature of the (literary) avant-garde.[46] In the case of hypertext fiction this rejection of literary influences has been particularly convincing because of the real newness of hypertext technology and the perceived novelty[47] of the concept. But now that both technology and concept have started to become more widespread and established, it is time to look again at those fictional texts that represent the ancestors of current hyperfiction experiments. Certain features of writing can only perceived in retrospect[48] and be defined and grouped together only when the terminology is available.

The new always affects the past and vice versa. As new technologies and artforms come onto the scene, they give us a unique moment of fluidity and transparency. With the emergence of the new we can distance ourselves from the old and, with a rare, nearly outside view, reassess it and understand some of emergent features that can dominate the new. With print we are in this curious state of transition at the moment. While trying

[44] Stuart Moulthrop, "Metonymy and Metaphor in the Fiction of Forking Paths", in: *Hypermedia and Literary Studies,* ed.by Paul Delany and George P. Landow (Cambridge, MA: MIT Press, 1991), pp. 119-133 (p.131).

[45] Jane Yellowlees Douglas, *Print Pathways and Interactive Labyrinths: How Hypertext Narratives Affect the Act of Reading*, Doctoral dissertation (New York: New York University, 1992), p.60.

[46] Following Peter Bürger's definition of the term (further outlined on page 206), I would prefer to consider experiments in hypertext fiction as part of a "neo-avant-garde" rather than fitting into more traditional definition of avant-garde, mainly for the reason that, despite the rejection of previous experiments, the possibility of art / literature is not negated and a new artform (rather than an anti-art) is being established.

[47] The idea of revolutionary is linked to newness. Newness not so much in absolute terms, but in terms of perception, the perception of difference and unfamiliarity in contrast to the familiar and established.

[48] Which has been argued by Carl Malmgren in the context of postmodern fiction: "Thus, for instance, we perceive now, but did not perceive 30 years ago - postmodern features in Tristram Shandy precisely because our eyes have learned to recognise pm features. And so we propose Tristram Shandy not Tom Jones as a 'postmodern book'. (Carl Darryl Malmgren, *Fictional Space in the Modernist and Postmodernist American Novel* (Lewisburg: Bucknell University Press, 1985), p.28.

to develop new forms of writing, what John Tolva calls very appropriately the "age of digital incunabula"[49], readers and authors are still rooted in the convention of the old. Postmodern thinkers have challenged our assumptions about writing and the book form. Jacques Derrida's propositions, though not at all directly referring to computer writing, can be read as premonitions of ideas picked up and elaborated in hypertext theory and practice:

> The end of linear writing is indeed the end of the book, even if, even today, it is within the form of the book that the new writings - literary or theoretical - allow themselves to be, for better or worse, encased. It is less a question of confiding new writing to the envelope of the book than of finally reading what wrote itself between the lines in the volumes. That is why, beginning to write without the line, one begins to reread past writing according to a different organisation of space. If today the problem of reading occupies the forefront of science, it is because of this suspense between two ages of writing. Because we are beginning to write, to write differently, we must re-read differently.[50]

The aim of this thesis is a re-reading of fictional texts, whose hypertextual elements can only now, as the term has become defined, be recognised as a common underlying principle. Its aim is, however, not only a one-way process of re-reading the old. By placing electronic fiction into a tradition, by bringing in the third element of influence on the early stages of hypertext and by approaching the shift from print to electronic medium as an evolution rather than a revolution this thesis seeks to contribute to the understanding of hypertext fiction and other experiments in computer writing, but also to point out some of the shortcomings of the interpretation and implementation of postmodern theories by hypertext fiction.

1.7: Brief Outline of the Thesis

> *Computers do have the potential to revolutionize our understanding of literacy, in the process changing the three basic terms text, reader and writer. (Myron Tuman)*[51]

In the following chapters, I will look at each of these three terms, concentrating on keywords of hypertext theory, its "grand narratives" (non-linearity and interactivity) in

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[49] John Tolva, "The Heresy of Hypertext: Fear and Anxiety in the Late Age of Print", at: http://sloop.abanet.it/~bellos/cafores.html (30/8/1996). no page numbers

[50] Jacques Derrida, *Of Grammatology*, quoted in Malmgren,p. 157.

[51] Tuman, Myron, *Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.42. (see also his discussion ibid, pp 62-80).

chapter 2 and 3 to discuss some of the problems with the often quite unrevised and often very literal appropriation of the terminology to hypertext theory and to hypertext fiction. Chapter 4 and 5 will look at alternative, though related, approaches to electronic fiction: Chapter 4 will examine aspects of collaborative writing in both a print and a digital environment while computer-generated writing stands at the centre of Chapter 5.

Chapter 2: A New Kind of Text?: Non-Linearity

2.1: Definitions of the Term Non-Linearity

"The new electronic literature breaks the bond of linearity and stasis imposed by paper" states Robert Kendall in his introductory essay to hypertext and hypertext literature entitled "Writing for the New Millennium"[1]; "The concept of non-linearity [...] has existed, but the tyranny of linear progression of the physical text from page first to page last has remained unbroken" argue Jane Douglas and Gordon Howell[2], and they are not the only ones to define hypertext through non-linearity in negative opposition to the linearity of the printed text. Nonlinearity as well as (Inter)activity, which is opposed to the alleged passivity of the reader of a printed text (see chapter 3), are two of the key terms in hypertext theory and no study concerned with hypertext can be conducted without a further discussion of the terminology.

> ***non-linear**: Not linear, not pertaining to, involving or arranged in a (straight) line (Shorter Oxford English Dictionary)*[3]

In the context of hypertext, the term non-linearity is generally used to refer to the organisation of hypertext nodes in such a manner that they can be accessed in more than one order. This order, depending on the structure of the hypertext network, the intentions of the author and the reading behaviour at the receiving end, can either be highly planned and rigid, i.e. the same link in one node will always link to the same corresponding node, or more flexible (or even random), i.e. with a high degree of

[1] Robert Kendall, "Writing For the New Millennium: The Birth of Electronic Literature", at: `http://ourworld.compuserve.com:80/homepages/rkendall/pw1.htm` (6.2.1996)

[2] Jane Y. Douglas and Gordon Howell, "The Evolution of Interactive Fiction", *Computer Assisted Language Learning: An International Journal*, vol. 2 (1990), 93-109 (p.100).

[3] *The New Shorter Oxford English Dictionary* (Oxford: Clarendon Press, 1993).

indeterminacy where links do not necessarily lead to the same link every time they are selected. Furthermore, a distinction can be drawn between hypertexts with nodes of restricted accessibility, i.e. that are only available internally from the nodes that directly link to them, and those hypertexts whose nodes can be accessed externally, for example through an overview feature, at any time from anywhere else in the text.

However, the term non-linear has been contested in hypertext theory:

> Non-Linearity is an empty term in the discourse of hypermedia that only shows how preoccupied writers on the subject have been with defining hypermedia in opposition to traditional media[4]

states Gunnar Listøl and argues that the term is a less than helpful attempt to describe the characteristics of hypertext. He suggest instead the terms "*multilinear* or *multisequential*" as more appropriate and preferable, and he is supported here by George P. Landow, who also chooses to use *multilinear* in his study on hypertext[5]. These are Listøl's preferred terms mainly for two reasons: firstly, by laying emphasis on the multifaceted character and not on any direct binary opposition, the terms put hypertext closer into the framework of postmodern thought, to which it feels a certain affinity. And secondly, he argues, the term *multilinear* can incorporate a number of linearities and comes "closer to the actual experience of reading a hypertext" while non-linear is a negative definition and negates the linearity of sequence.

This is especially important, because it recognises one of the major issues at the heart of the non-linearity debate: namely that language is inherently linear, and that, despite a spatial physical representation of language as written word on page or screen, the processes of reading and decoding it, even in a hypertext, remain a linear process, happening in time rather than in space.

In *Linguistics and the Novel* Roger Fowler draws on Chomsky's transformational-generative grammar to distinguish the "surface structure" of a text (sound, written symbol, word-

[4] Gunnar Listøl, "Wittgenstein, Genette, and the Reader's Narrative in Hypertext" , in: *Hyper/Text/Theory*, ed.by George P. Landow (Baltimore, MA: Johns Hopkins University Press, 1994), pp.87-120 (p.110).

[5] George P. Landow, *Hypertext*, p.4; Stuart Moulthrop suggests "poly-sequential" for similar reasons in "Electronic Fictions and 'The Lost Game of Self.'", *New York Review of Science Fiction*, no.66 (February 1994), 1, 8-14 (p.11).

and phrase-order) from the "deep structure"[6] (the abstract content, the "structure of meaning"), an extension of the traditional linguistic conceptual division of signifier and signified. He then defines linearity as one of the major characteristics of the surface structure: "sentences, but not their meanings, which are abstract, move from left to right in space or time, shifting the reader's attention along and sometimes impending it"[7] and confirms this notion at a later place where he says: "Texts can be thought of as a sequence of phrases and sentences [...] working progressively and disruptively to allow [the reader] to retrieve the meaning from a surface structure in an ordered (or disordered!) sequence."[8]

While I fully agree with his observations about the abstract, complex and cumulative deep structure, I feel that his term *surface structure* needs to be examined and sub-divided further to allow a discussion of linearity / non-linearity. Useful here is a distinction Espen Aarseth makes between what he calls "text as information" (i.e. the construction, the physical presentation of the whole text) and the "text as interpretation"[9] (i.e. the consumption, focused on the reader's reception), for both of which Fowler uses the term *surface structure*. Aarseth argues that while the first has a spatial character, the second is a linear, temporal process.

Hypertext cannot overcome the linearity and temporality of the consumption of a text in the process of reading, no matter how atomised the individual nodes - and here one can imagine nodes consisting of single words or even letters. It can, however, represent the spatial nature of the construction of the text. Zooming out and looking at a hypertext as a whole, a hypertext is a non- / multi-linear spatial entity; zooming in, it can only be realised in (often a large number of) linear fashions. The construction exists in space, the consumption in time.

This is of course also true for any physical object containing written text, and one might

[6] Roger Fowler, *Linguistics and the Novel* (London and New York: Methuen, 1983; first published: 1977), p.6.

[7] ibid, p.6.

[8] ibid, p.49.

[9] Espen J.Aarseth, "Non-Linearity and Literary Theory", in: *Hyper/Text/Theory*, ed.by George P. Landow (Baltimore, MA: Johns Hopkins University Press, 1994), pp.51-86 (p.53-54).

argue that the book as a three-dimensional object actually has a larger physical presence than the two-dimensional representation of a hypertext on the screen, I would like to suggest that hypertext networks, with the possibility of multiple and flexible links, have an edge over the fixed order of print text in representing the complex, internal relationships of the deep structure of narratives. This is not to say that this complexity does not exist in "linear" print text, since it is perfectly possible to express a non-linear narrative in a linear text and is in fact frequently done but that it is only the representation of the narrative complexity that may be facilitated in hypertext. But are these texts more successful? Does the contradiction and tension between the linear nature of speaking, writing and reading and the non-linear complexity of narratives limit or does it, as hyperfiction theorists argue, enhance the expressive possibilities? To attempt an answer I will analyse and compare the strategies employed by writers of print fiction and hypertext fiction in their work, as well as readers' reactions to it, using text of both kinds that are either related explicitly (e.g. electronic re-workings of print texts such as Stuart Moulthrop's *Forking Paths* , based on a short story by Borges, or the CD-ROM of Andreas Okopenko's *Lexikon Roman*) or that implicitly concern themselves with similar topics, structures or problems.

In her doctoral thesis[10], which researches readers' responses to hypertext fiction against the background of reader-response theory and empirical studies of her own along with her students' reading experiences, Jane Yellowlees Douglas identifies two main categories of non-linear narratives: the first she calls MOSAIC narratives. These are narratives that are presented in a fragmented format, both on a level of physical presentation and consequently of narrative (organised at random or according to some ruling principle), and in which the reader will in the act of reading attempt to establish a coherent version of the story, based on notions such as causality and temporality. The second she describes as "narratives of MULTIPLICITY", whose key-interest lies in a) either to express simultaneity of different narrative strands or different version of the same events or b) mutually exclusive, parallel developments.

[10] Jane Yellowlees Douglas, *Print Pathways and Interactive Labyrinths: How Hypertext Narratives Affect the Act of Reading*, Doctoral dissertation (New York: New York University, 1992), p.65.

These categories, though devised with hypertext fiction in mind, apply equally to print fiction, which struggles with notions of simultaneity and multiplicity both on the level of presentation and of narrative throughout the 20th century and which has not only inspired hypertext fiction, but, as I would like to argue, manages to express and discuss these notions equally successfully, if not in fact more effectively.

2.2: Multiplicity 1: mutually exclusive developments: The infinite possibilities of the "Forking Path".

A short story that explores questions of multiplicity is Jorge Louis Borges' "The Garden of Forking Paths"[11], which has inspired Stuart Moulthrop to write his experimental hypertext fiction *Forking Paths*. This text is one of the earliest hyperfictions (1986) and is written in a beta-version of Storyspace, the hypertext environment that has by now become most commonly used by hyperfiction authors. In 1987, Jane Yellowlees Douglas conducted interesting research into a literature undergraduate course, in which she wanted to introduce the students to the then very new genre: one half of her course read Borges' print short story and the other read Moulthrop's electronic text. Both groups were then asked to summarise a) their understanding of the narrative and b) their reading experiences.[12]

The main theme of Borges' short story is the inherent plurality of possibilities in any situation or act. Yu Tsun, a spy whose task it is to signal secret information to the Germans before being caught by his British opponent, randomly chooses the British sinologist Stephen Albert as a vehicle for his secret. Albert turns out to have studied the work of Yu Tsun's grandfather, Ts'ui Pên, who was said to have spent most of his life working on a novel and a labyrinth "in which all men would become lost" (p.48). The labyrinth was never discovered and the book exists only as a large pile of contradicting drafts. Albert's theory, however, is that the book and the labyrinth are one and the same, and that the manuscript is the "garden of forking paths", the embodiment of "an infinite series of times [...] a growing, dizzying net of diverging, converging and parallel times"

[11] Jorge Luis Borges, " The Garden of Forking Paths", in: *Labyrinths: Selected Stories and Other Writings* (Harmondsworth: Penguin, 1970), pp.44-54.; first published as "El Jardín de Senderos que se bifucan" in 1942 in a collection bearing the same title (Buenos Aires: Sur, 1942).

[12] Douglas, *Print Pathways,* pp.94ff.

(p.53), a labyrinth constructed not of any material but of symbols, and not in space but in time - a theory that Yu Tsun is inclined to believe. The story, that until this point has been based on a series of chance encounters and random decisions and has outlined a theory of infinite possibilities and alternative outcomes, comes to a single ending when Yu Tsun is discovered by his British opponent, has to kill Albert and is killed himself not much later - "ironically reducing the infinity hinted at in the story to a single, sordid conclusion".[13]

Moulthrop's hypertext uses the metaphor of an infinite forking path as a starting point for his reworking of the text and creates "both a figurative and literal labyrinth"[14] . There are twelve permutations of the ending, a well as retelling of strands from the original story from alternative points of view, complete reversals of character traits and motives as well as meta-textual commentary on the nature of interactivity.

A meta-textual element, albeit less explicit, is also constantly present in Borges' text. "The Garden of Forking Paths" alludes to an infinite number of decision points and possibilities, but realises only one. Albert explains to Yu Tsun:

> In contrast to Newton and Schopenhauer, your ancestor did not believe in a uniform, absolute time. He believed in an infinitive series of times, in a growing, dizzying net of divergent, convergent and parallel times. This network of times which approached one another, forked off, or were unaware of each other for centuries, embraces all possibilities of time. (p.53)

This represents not only, as Stuart Moulthrop interprets it, "a self-conscious critique of the representation of time in conventional narrative"[15], but also a questioning of traditional Western concepts of time, a theme that runs through much of Borges' work[16].

In Western thought, the linearity of time, i.e. the notion that time progresses forward and that of all potential possibilities only one is ever realised, is reflected in conventional

[13] Douglas, *Print Pathway*, p.93.

[14] Douglas, *Print Pathways*, p.93.

[15] Stuart Moulthrop, "Reading from the Map: Metonymy and Metaphor in the Fiction of Forking Paths", in: Paul Delany and George P. Landow (eds.), *Hypermedia and Literary Studies* (Cambridge, MA: MIT Press, 1991) pp.119-132 (p.120).

[16] for example his essay "A New Refutation of Time" (first published 1947 and currently in the *Labyrinth* collection) and other short stories in the same collection; see also Emir Monegal's discussion of Borges' work "Borges: The Reader as Writer" (*TriQuaterly*, vol.25 (Fall 1972), pp.102-143).

narratives and reading expectations. Borges confirms them; he consciously chooses to limit his narrative to a single ending, but only after he has outlined and discussed alternative, more pluralistic systems. This contradiction only strengthens the effect of the restrictions under which he puts himself and the reader.

Douglas' group of students understood this strategy instinctively and came to the conclusion that the ending given is only one possibility and that they are free to reject it. She quotes one student who writes:

> For all we know, the particular end used in this story may have been only one of an infinite number of possibilities down the "forking path" of time. Since, according to the all-wise Ts'ui Pên, all of these possibilities peacefully co-exist in parallel dimensions, isn't it true that we can reject this ending and make up our own?[17]

Both Douglas and Moulthrop interpret this reaction as disappointment with Borges' story "having opened the possibility for a universe in which multiple possibilities co-exist"[18], then failing to deliver it, rather than, as I would interpret it, positive frustration that leads to successful insights into the nature of both literary conventions and concepts of time.

One of Moulthrop's intentions behind writing the *Forking Paths* hypertext was to write a narrative with a structure that would not contradict its own theme of multiplicity. His critique of Borges can best be explained in terms of Barthes concepts of *text* and *work*.[19] While evoking the possibilities of the text (i.e. an infinite number of interpretations contained in one narrative), Borges' short story is still only a *work* (i.e. one realisation of this infinite time-space universe). Moulthrop sees hypertext fiction as *text*, a narrative network whose potential is always greater than the individual pathways through it, not only on a metaphorical but on a literal level.

> In Borges' conventional narrative, readers are asked to imagine a world of multiplicity from within an overwhelmingly linear and exclusive medium. For most hypertextual readers the situation is reversed - given a text that may contain almost any permutation of a given narrative situation of this field of possibilities that answers to their own engagement with the text.[20]

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[17] Douglas, *Print Pathways*, p.105.

[18] Douglas, *Print Pathways*, p.105.

[19] As he does himself in his essay "Reading from the Map"; the relevant Barthes essay "From Work to Text" can be found in the collection *Image, Music, Text*, selected and translated by Stephen Heath (London: Fontana Press, 1977).

[20] Moulthrop, "Reading from the Map", p.125.

But how do readers engage with the text? How do they cope with this "field of possibilities that Moulthrop describes above? Jane Douglas describes frustration, confusion and a computer room ringing "with a continuous cacophony of Macintosh beeps"[21] as her readers, admittedly young and new to the medium of electronic text, were trying to make sense of the narrative, to extract out of the multiplicity of narrative possibilities the one "true" event, to construct through their accumulated understanding an overall metaphor of the text.

> *As readers read, as they begin to construct a virtual text of their own, it is as if they were embarking on a journey without maps. (Jerome Bruner)*[22]

Stuart Moulthrop argues that readers of print narratives read towards a final understanding of the narrative as a whole, a metaphor of completeness and refers to Peter Brooks who, drawing on Jacobson and Todorov, writes in *Reading for the Plot* that:

> we read the incidents of narration as 'promises and annunciations' of final coherence, that metaphor may be reached through a chain of metonomies: across the bulk of the yet unread middle page, the end calls to the beginning, transforms and enhances it.[23]

Out of the multitude of confusing and possibly contradictory narrative events, readers move through the text and gradually narrow down the narrative possibilities to extract the final metaphor of the text as a whole. Readers of print fiction map out the narrative space gradually. The physical presence of the whole text gives readers initial information on the meta-textual level (length and density). In their reading they constantly switch between the microstructure of the text and their evolving understanding of the macrostructure to eventually grasp the overall metaphor (the map) of the text.

Hypertext fictions begin with the map. It is the framework within which readers read and individual elements are interpreted against. Moulthrop argues:

> The map, which represents the totality or metaphor, was not something to be reached [...], rather it was the conceptual framework, providing essential categories of 'right', 'left' 'up' and 'down' by which the readers orient themselves.

[21] Douglas, *Print Pathways*, p.94.

[22] Jerome Bruner, *Actual Minds, Possible Worlds* (Cambridge, MA: Harvard University Press, 1986), p.36.

[23] Peter Brooks, *Reading for the Plot: Design and Intention in Narrative* (Cambridge, MA and London: Harvard University Press, 1992), pp.94-95.

Instead of "reading for the plot" hypertext readers are "reading from the map" - which explains the title-pun of Moulthrop's essay discussing *Forking Paths* and Brooks' work.

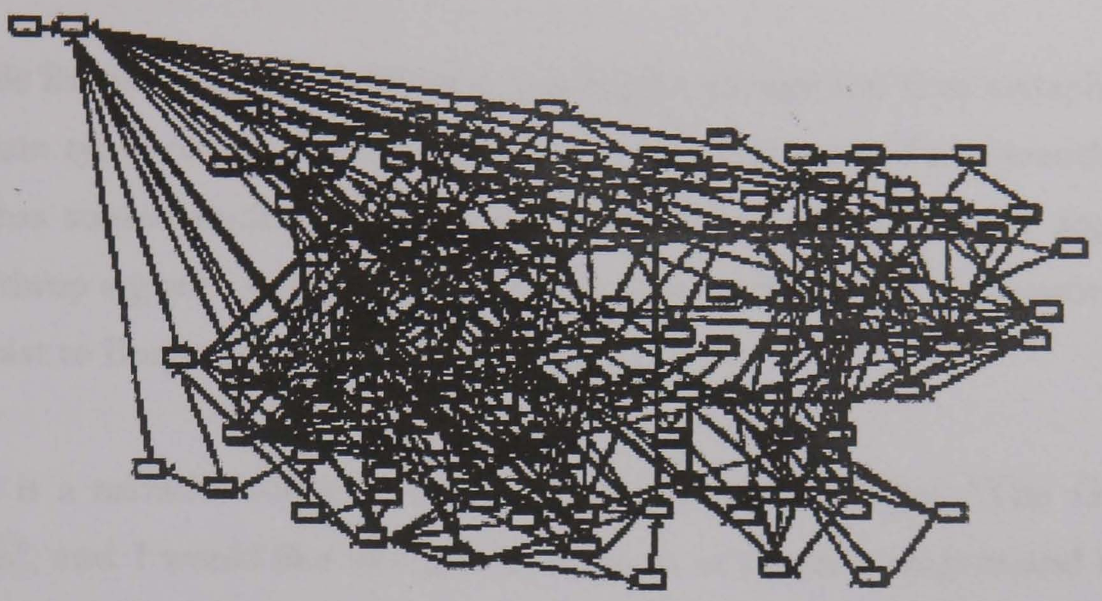

Figure 1: reduced Storyspace map of "forking paths"

In Douglas' experiment readers did not have at their disposal the overview feature of later versions of *Forking Paths* (that would include, amongst other navigational features, an overview map such as the one above) but had to rely on their mental map of the narrative, which they developed early on in their reading[24], having achieved some sense of narrative space by manoeuvring through the text with the help of the arrow keys. The map of a hypertext, whether actual or mental, is not the final metaphor of the text that print readers strive for, but a map of all the narrative possibilities the hypertext can offer. Once the map has been grasped by readers and they have developed a sense of their own position in relation to it, it is used as a tool to construct a number of possible readings of the text. It is not superimposed on the text, but an integral part of it, is reader-centred, shifting and developing as the reader moves along. It develops through the reading, but at the same time makes it possible, since it is only with the help of the map that readers of *Forking Paths* could make some sense of the individual fragments in relation to each other and the whole of the text.[25] The hypertext map functions as a representation of all

[24] Douglas observes that after a few minutes into the reading, students would give up their attempts to find the words that "yield" and link to another node in the text - which was the way Moulthrop had intended it to be read - but manoeuvred through the text with the arrow keys instead. (Douglas, *Print Pathways*, p.97).

[25] The similarities between this concept of the hypertext map and the Deulezian concepts of mapping and rhizome have been remarked on by Kathleen Burnett in her essay "Towards a Theory of Hypertextual Design", *Postmodern Culture*, vol.3 no.2 (January 1993) (electronic journal) at: `http://jefferson.village.virginia.edu/pmc/issue.193/burnett.193` (29.1.1996), no pagenumbers.

narrative possibilities, whereas the map / metaphor of the linear print narrative represents one actual narrative realisation of the text.

However, while Brooks' theory of fulfilment, reading for closure and final metaphor works well with certain types of text (such as detective stories and most of nineteenth century fiction[26]), it has subsequently been undermined and can be far less easily applied not only, as Moulthrop argues[27], to hypertext fiction but also to modernist and postmodernist fiction, not least to Borges himself.

Forking Paths is a narrative about its own structure. But so is Borges' "The Garden of Forking Paths", and I would like to argue that it is so in a equally elegant and revealing way. Borges realises that the infinite network of possible parallel developments can never be realised in any text in perfection (even Ts'ui Pên's manuscript is no more than a failed attempt to embody his philosophy) and opts to convey the concept in theory through his discussion of it and through the very linear and excluding structure of his text that contradicts its contents uncomfortably and therefore thoughtprovokingly. Moulthrop, on the other hand, wants to realise a version of this infinite network in his hypertext and wants readers to experience it in their readings. He writes that:

> Dispensing with the elegant detachment of a purely theoretical deconstruction, a hypertextual fiction would take it upon itself to explore [...] excluded possibilities, along with various networks of narrative that might pertain to them.[28]

Borges writes a description of the "garden of forking paths", Moulthrop tries to achieve its embodiment. But here lies the problem with Moulthrop's approach and is where the discrepancy between hypertext theory and practise in hypertext fiction can be identified. When Robert Coover argues that the "hypertextual storyspace is now multidimensional and *theoretically* infinite", he unintentionally touches the core of the problem. What is a theoretical strength of hypertext is its practical weakness, since no author, even in collaborative effort, could ever realise this infinite network; Moulthrop's

[26] A point Brooks himself is acutely aware of in his discussion of, amongst others, Borges in his book.

[27] Moulthrop, "Reading for the Map", p.129. Moulthrop does accept the limitations of Brooks' theory ("this theory is admirably suited for the interpretation of conventional narratives [...]"), he then contrasts it solely with hypertext fiction ("but it probably does not hold for hypertext"), leaving out again a whole history of modernist and postmodernist fiction.

[28] Moulthrop, "Reading from the Map", p.124.

12 endings in *Forking Paths* only distract from the fact that any number of options can only be finite. While the 'garden of forking paths' is an intriguing and beautiful metaphor, an attempt to realise it in any medium can only be disappointing and the result, as Douglas' students' reaction has shown, can be confusing rather than enlightening.

It is interesting to note in this context the different spatial metaphors Borges and Moulthrop use. While Borges employs the labyrinth as a metaphor for Ts'ui Pên's manuscript and ultimately the world, a metaphor of confusion, disorientation and the loss of perception of one's own position in relation to the space one moves in, Moulthrop hinges his argument around the map, a controlling device to gain orientation and to position oneself in a space; which is maybe indicative of the pessimism of the first and the optimism of the latter about the possibilities to master complex structures of the narrative world.

2.2.1: Lost in Hyperspace? The Problem of Orientation

> *Hypertext theorists frequently employ spatial imagery to describe the relations made possible by links and textons: maps, three-dimentionality, textual landscapes, navigation, topography, and the like, this rhetoric fails to hide the fact that the main feature of hypertext is discontinuity - the jump - the sudden displacement of the user's position in the text. (Espen Aarseth)*[29]

Is the "tangible lack of macrostructure" that Douglas' students experienced only caused by their inexperience with hypertexts and the fact that the beta-version of Storyspace they used did not include an overview feature? How can the confusion, that Douglas has identified as one of the predominant initial reactions to Moulthrop's hypertext, but has also been described by others and is generally been referred to as the 'navigational

[29] Aarseth, Espen J., "Non-Linearity and Literary Theory", p.68-69. Douglas argues that the jump in hypertext resembles the cut in cinema, where what we perceive are not the cuts, but the connections. This reaction, which she explains as a consequence of "biases of human perception toward seeing causality and intention even where these qualities may not exist " is, however, equally based on a process of refinement in reception from early to contemporary cinema audiences, and is based on shared conventions rather than any inherent relationship between the scenes.Hypertext readers have probably more in common with early cinema audiences and their confused reactions to the new medium than the sophisticated cinema audience of today. And even though it might be argued that the hypertext readers are part of this cinema audience, it does not follow that they approach the medium with a similar sophistication. Skills of perception and interpretation acquired in one medium cannot be directly transferred to another. ("Gaps, Maps and Perception:What Hypertext Readers (Don't) Do", *Perforations* (electronic journal) at: `http://www.pd.org/perforations/perforations.html`), no page-numbers).

problem'[30] by hypertext theorists be explained? And how can it be avoided? Or is it not desirable to avoid it, but should it in fact be welcomed as an active expression of the condition of postmodernity in the act of reading?

> *Threatened by the networks, databases, and electronic libraries, which are becoming commonplace, we cannot help but pity the reader who is told to "enter and explore" to locate the answer to his problem. Now he has an even greater problem; much more than being "lost in hyperspace", he might actually be in danger of the paralysing vertigo that is said to afflicted astronauts engaged in extravehicular activities when they confront the endless depth of space that stretch beyond comprehension in all directions. "Enter and explore" is a condemnation, not a solution. (Joseph T. Jaynes)*[31]

It is important to note here that Jaynes assumes that a reader enters a hypertext to find "the answer to his problem". In tune with early hypertext research he starts with the assumption that the hyperspace the reader gets lost in is the space of a factual hypertext that the reader approaches with well defined aims and questions.

There are indeed fundamental differences in reading behaviour between factual and fictional uses of hypertext which is important to have in mind when dealing with the issue of hypertext fiction. The first collects factual information and arranges it in a hypertext format to make it more easily accessible, the latter uses hypermedia systems as a creative tool. When Vannevar Bush outlined his first idea of hypertext in his seminal essay "As We May Think"[32], it was the ease with which a large mass of factual information could be stored and organised in a personalised way that was on his mind. Creative use of hypertext is a very different thing, and one has to be very careful not to apply too readily to creative use concepts that are true and obvious for factual texts.

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[30] A comprehensive, though rather unreflected pro-hypertext ("The impulse towards hypertext grew out of dissatisfaction with the limitations of linear writing, echoed in the intuitive conviction that a less restrictive medium would permit writer to express complex relationships and structures with greater clarity and precision" p.285) discussion of the problem and suggested solutions offers Mark Bernstein's essay "The Navigation Problem Reconsidered", in: *Hypertext / Hypermedia Handbook* ed.by Emily Berk and Joseph Devlin (New York: Intertext Publications / MacGraw Hill, 1991), pp.285-298. See also: Johnson-Eilola, Jordan, "Reading and Writing in Hypertext: Vertigo and Euphoria", in *Literacy and Computers: The Complications of Teaching and Learning with Technology*, ed. by Cynthia L. Selfe and Su Hilligoss (New York: The Modern Language Association of Amerika, 1994), pp.195-219.

[31] Joseph T. Jaynes, "Limited Freedom: Linear Reflections on Nonlinear Texts", in *The Society of Text, Hypertext, Hypermedia and the Social Construction of Information,* ed. by Edward Barrett (Cambridge, MA: MIT Press, 1989). pp.155-161, p.159.

[32] Bush, Vannevar, "As We May Think", no page numbers.

The confusion of readers of hypertext fiction is very different from the confusion of readers in a badly constructed factual hypertext: while in the former they may fail to make satisfactory sense of the narrative and/or understand its structure, in the latter they may fail to manoeuvre around the hypertext space sufficiently well to solve their initial problem. It is therefore important roughly to distinguish between factual (or non-fictional) and creative (or fictional)[33] uses of hypertext. Readers approach fictional and factual text with different sets of expectations, and even if the text in question does not fulfil or deliberately contradict them, they are still read and received against this background.

The most common hypertext applications are of a factual nature and most of us have no problems seeing and accepting their advantages over similar projects in print. Encyclopaedias, for example, try to organise a vast amount of information that is naturally linked - and are therefore ideally organised in a hypertext. They, as well as tours around museums, car spares catalogues, learning resources and other examples of factual hypertext, fulfil the three golden rules Ben Sheiderman has outlined for material suitable for a hypertext: there is a large body of information organised in fragments; the fragments are related to each other; and one only needs a small part at a time.[34]

With narratives these requirements become problematic:
First of all they do not have a natural complexity; the fictional world, though to an (smaller or larger) extent based on the real world, is created by the author. And secondly, readers of factual applications usually have a specific aim: in, for example, a virtual Tour of the Louvre, they want to find out about the history of a certain painting, learn about a painter or even see what is generally available in the museum. Brenda Laurel distinguishes between "serious" and "non-serious" reading, or what she calls "searching" and "browsing" modes, between which users tend to switch.

> People tend to move back and forth between browsing and focused searching "modes". They look around, then follow a line of investigation in an orderly and goal-oriented fashion for a while, then begin to browse again[35].

[33] I am fully aware that these two categories do not exist in pure form, but always overlap.

[34] Ben Sheiderman, "Reflections on Authoring, Editing and Managing Hypertext" in: Edward Barrett (ed.), *Society of Text: Hypertext, Hypermedia and the Social Construction of Information* (Cambridge, MA: MIT Press, 1899), pp.115-131, p.115.

[35] Brenda Laurel, *Computers as Theatre* (Reading, MA.: Addison-Wesley, 1991). p.25.

Readers of fiction do not switch between modes, i.e. they are not trying to access a small amount of information in the text. The reading of fiction can overall be best described as browsing, though not in the random, unfocused way the term might imply. Readers generally approach a fictional text without a specific aim other than to share the author's world for a while and re-create the potential fictional world in their reading. Their reading is not driven by an external goal (for the achievement of which they use the structure of the text like a tool), but is driven by a curiosity created internally by the text and, instead of looking for a small fraction of the information, they want to get an impression of the whole work.

Hypertext fiction wants to encourage and support browsing; its ideal is to give readers greater opportunities to satisfy their curiosity. By fragmenting a text into short screen-size units and linking them together with multiple links to a spatial network an author creates a structure that invites the reader to explore the narrative and to follow many different paths through it.

But it is here where the expectations raised by hypertext theory seem to be most often disappointed in current hyperfiction: readers, as seen above in the case of *Forking Paths*, may feel disorientated rather than empowered[36] and the curiosity that keeps readers reading can easily give way to frustration. Any hypertext application has to deal with problems of disorientation, coherence and predictability of links, but in creative applications these become even more apparent. In the following I would like to touch on a few of these problems in the specific case of hypertext fiction.

2.2.2: Predictability

One of the problematic areas is the predictability of links. For non-fictional texts this issue, though extremely difficult to implement in practice, has principally a very simple

[36] 'Empowerment' is another example of the 'revolutionary rhetoric' frequently associated with hypermedia and multimedia. But the result is often contrary: Janet H.Murray, who runs a hypertext-seminar observes this reaction when her students are exposed to hyperfiction by Michael Joyce and Stuart Moulthrop (who she calls the "postmodern hypertext group"): "The blind navigating tends to mitigate against the democratic aspirations of the postmodern hypertext group. Instead of feeling empowered by experiencing an undetermined text, students often feel tyrannised by a pre-determined set of often frustrating and incoherent paths." (Murray, Janet H., "The Pedagogy of Cyberfiction: Teaching a Course on Reading and Writing Interactive Narrative", in *Contextual Media: Multimedia and Interpretation*, ed.by Edward Barrett and Marie Redmond (Cambridge, MA: MIT Press, 1995), pp.129-162 (p.146)).

answer. It is vital that the reader knows where in a network s/he is and is able to predict where a certain link will take him/her (after all the word link implies a connection between the two nodes it connects). If the links offered, that readers assume to be important and meaningful, are too obscure and connect nodes in unpredictable and random ways, the reader cannot feel in control of the reading. The feeling of "being lost" should be avoided if the aim is to facilitate easy and controlled access to complex information.

In (hypertext) fiction, the issue of predictability becomes more problematic. Michael Riffaterre[37] argues that it is not predictability, but the UNpredictability of a text that keeps up the readers' interest and is one of the defining features of a literary text. Reading is a temporal and cumulative process; every new element adds to and alters the understanding of the text as a whole. But reading is not only a backward process (incorporating new information into what has already been read), but also looks forward. At any point predictions are being made about what is to come, both on the micro-level of the sentence (e.g. that an article is followed by a noun) and on a macro-level (the narrative development). These predictions, guided by the text but individual to each reader, are then either satisfied or frustrated by the text. And it is the unpredictability, the disappointment of expectations, the element of surprise that defines a literary text and keeps readers reading.

Wolfgang Iser observes:

> Expectations are scarcely ever fulfilled in truly literary texts. [...]. Strangely enough, we feel that any confirmative effect - such as we implicitly demand of expository texts [...] - is a defect for a literary text. For the more the text individualizes or confirms an expectation it has initially aroused, the more aware we become of its didactic purpose."[38]

When the flow of reading is interrupted and the text swerves in unexpected directions, the reader is given the opportunity to actively engage with the text and to

[37] Michael Riffaterre "Describing Poetic Structures: Two Approaches to Baudelaire's 'Les Chats'", in: Jane P. Tompkins (ed), *Reader-Response Criticism: From Formalism to Post-Structuralism* (Baltimore and London: Johns Hopkins University Press, 1980). pp.26-40.

[38] Wolfgang Iser, "The Reading Process: A Phenomenological Approach",in: Tompkins, *Reader-Response Criticism*, pp.50-69 (p.54).

establish new connections - to "fill the gaps left by the text itself".[39]

Hypertexts, where the links between text nodes become literal gaps, seem to be an ideal medium to encourage reader activity. There is, however, a thin line between surprise and frustration that the incoherence and unpredictability of a text can result in, defined by B.Ritchy and quoted by Iser as follows:

> Roughly, the distinction can be made in terms of the effects which the two kinds of experiences then have upon us. Frustration blocks or checks activity. It necessitates new orientation for our activity, if we are to escape the cul de sac. Consequently, we abandon the frustrating object and return to blind impulse activity. On the other hand, surprise merely causes a temporary cessation of the exploratory phase of the experience and a recourse to intense contemplation and scrutiny.[40]

The opposite of predictability is not a total unpredictability (which may lead to frustration and cause the reader to give up), but a text that, though it disappoints prediction, is still related to what it precedes and consequently draws the readers' attention even closer to the text. And it is the unpredictability (of shifts in temporal and thematic focus) that Douglas' students complained about most; not the fragmentation of the narrative or the shifts themselves (which are a familiar feature of contemporary literature and their own experience of late 20th century life), but the inability to fit them into a larger scheme, to perceive the overall 'plan' that would enable them to distinguish between deliberate and random incoherence.

2.2.3 Coherence

Even though the inconsistencies and surprises are a vital element of the fictional text, the reader will "strive, even if unconsciously, to fit everything together in a coherent pattern"[41], and reading is ultimately a search for a consistent interpretation.

Readings can be anywhere on a scale from absolute consistency to extremely interrupted and defying consistency. Two extremes that Jay David Bolter and others refer to as transparency and opacity, on one hand looking through the text to the world it represents; on the other hand looking at it, an emphasis of the physical and technical

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[39] ibid. p.55.

[40] B.Ritchy "The Formal Structure of the Aesthetic Object" quoted on in Iser, "The Reading Process, p.61.

[41] Iser, "The Reading Process", p.58.

aspects of the text[42]. If a reading is too consistent it will be an "uninterrupted building of illusion"; if however a reading is too interrupted, it may emphasise what Iser calls the "polysemantic character"[43] of the text, its make-up and its fictionality, where there is no possibility for the reader to get into the text. Ideally an author wants to achieve a constant oscillation between the two extremes, and especially in experimental print fiction of the twentieth century, one can observe an increasing shift towards "opacity", emphasising fictionality and breaking with rules and expectations[44].

Hypertext fiction can often be extremely opaque and consequently a cause of frustration for readers. Some of the reasons for that have to do with the relative inexperience of both authors and readers with the new medium that, simply through its unfamiliarity, stresses its material side and its structure to an extent that can make it difficult to access the text, even for readers experienced in experimental print fiction; with greater familiarity this will be eased. But there are also problems inherent in the electronic text that are more difficult to overcome, such as questions of temporality and reading order.

2.2.4: Temporality

Another difference between fictional and non-fictional texts is the element of temporal development.

> Descriptive or expository propositions [...] are distinct from narrative ones in that they are thought of as simultaneously valid according to some spatial or logical principle which is relatively or ideally independent of temporality.[45]

This temporal character, the existence of a story, is, according to Shlomith Rimmon-Kenan in her work on narratology, a distinguishing characteristic of fictional texts: "The presence or absence of story is what distinguishes narrative from non-narrative texts."[46]

A narrative can be described as a series of events unfolding over time, and even though the order in which these events are told in the text (the text-time) is not necessarily the

[42] Jay David Bolter, *Writing Space: The Computer Hypertext and the History of Writing* (New York: Laurence Erlbaum, 1991), p.63 ff.

[43] Iser, "The Reading Process", p. 58.

[44] some examples, such as Andreas Okopenko's *Lexikonroman einer sentimentalen Reise zum Exporteurtreffen nach Druden* or Ronald Sukenick's *OUT* will be discussed later in this study.

[45] Shlomith Rimmon-Kenan, *Narrative Fiction*, p.15.

[46] ibid, p.15.

temporal order of the story (the story-time)[47], readers will always attempt to put elements into a temporal and causal logical order. A man who wakes up has been asleep, a man who gets up has been sitting, a man who dies has been alive before (and will be dead from now on) etc., all these assumptions and causal relations are made by readers based on their everyday experience of the physical laws of the world surrounding them, against the background of which their reading is based (with probably the exception of fantasy and SF novels, in which the common physical laws are constantly broken and readers approach texts with this knowledge as part of their reading framework).

Not all texts, of course, adhere to these assumptions. Especially in modern texts a mimetic relation between the real and the fictional world is replaced by fictional worlds that are alternatives but not necessarily representations of reality. In Robbe-Grillet's *Dans le labyrinthe*, for example, the hero dies four times against all physical logic. This is, however, because of the linear presentation of the text, immediately recognised as a deliberate experiment planned by the author, which readers can tolerate and interpret in the knowlege of the underlying theoretical framework. In a labyrinthian hypertext contradictory occurrences like this are less easy to contextualise. "The book is a heap of contradictory drafts" Yu Tsun says about his ancestor's labyrinth book, "I examined it once: in the third chapter the hero dies, in the fourth he is alive." (p.50), and a similar reaction came from students confronted with Moulthrop's *Forking Paths*, where, depending on the order in which fragments are accessed, the protagonist dies and is later alive again[48] , or can be experienced in Michael Joyce's *afternoon*[49] , in which it is left open throughout the hypertext whether the protagonist's son has or has not been killed in a car crash.

Hypertext fiction shares with other hypertext applications its spatial arrangement, which, while again useful for non-fictional texts, may cause friction with the temporality of fictional texts. It can be very difficult to put the individual fragment (which is physically and logically more lacking context than it would be in a print text), to arrange elements

[47] see Gérald Genette's *Narrative Discourse* (New York: Cornell University Press, 1980) for an extensive discussion of story- vs. text-time.

[48] see: Douglas, *Print Pathways*, p.101.

[49] Michael Joyce, *afternoon: a story*, Storyspace disk for Macintosh (Watertown, MA: Eastgate Systems, 1987).

into a temporal or causal order, or, if this order is never intended, recognise this strategy as deliberate. In a hypertext, readers may come across either the same node twice or even more times, or (perhaps more problematically) not at all. Also, they might come across certain pieces of information at the "wrong" time, which is especially problematic with open hypertexts, in which nodes are accessible in any order. With the increasing instability and flexibility of the reading order in a hypertext, readers may also increasingly fail to interpret contradictory story elements as a deliberate defamiliarisation strategy.

2.2.5: Reading Order

Because of the linear nature of the reading process, the order in which information is taken in is vital, both from the viewpoint of cognitive psychology and narratology: "The human mind [...] operates by association ", states Vannevar Bush[50], and proposes his early MEMEX hypertext system for information gathering and storing to mirror this. This belief in the more "natural" qualities of hypertext and the idea that it is therefore a more efficient way of accessing information, as opposed to the linear, sequential processes enforced by print texts where ideas can only be represented in one particular physical order, has been echoed ever since: "Reading in a hypertext is understood as a discontinuous or non-linear process which, like thinking, is associative in nature, as opposed to the sequential process envisioned by conventional text"[51] John Slatin states and Michael Heim argues that "hypertext fosters a literacy that is prompted by jumps of intuition and association"[52].

In her essay "The Effect of Hypertext on Processes of Reading and Writing" Davida Charney[53], however, argues that cognitive research has shown that the order in which information is taken in is vital for the efficiency with which it is processed. Information that has no obvious connection to what immediately precedes it and/or relates to what was read a while ago (and is therefore no longer "active" in the short term memory) is often regarded as unimportant by readers and ignored because it cannot be put into a

[50] Vannevar Bush, "As We May Think", no page numbers.

[51] John Slatin, "Reading Hypertext: Order and Coherence in a New Medium", *College English*, vol.52, no.8 (December 1990), pp.870-883 (p.874).

[52] Michael Heim, *The Metaphysics of Virtual Reality* (Oxford: Oxford University Press, 1993), p.30.

[53] Davida Charney,"The Effect of Hypertext on Processes of Reading and Writing", in *Literacy and Computers: The Complications of Teaching and Learning with Technology*, ed. by Cynthia L. Selfe and Susan Hilligoss (New York: The Modern Language Association of America, 1994), pp.238-263.

context. Texts have a linear structure not only because of the print medium they are in but because it is one our brain can cope with well; to "free" a text from linearity can be very problematic. For centuries rhetoric has been concerned with the art of arranging arguments in such a way as to achieve maximum effect. The structure of a text is an important part of the argumentation and a well-constructed 'linear' line of argument is still regarded as one of the most powerful ways to forward ideas and thoughts. In hypertext, with an emphasis on non-linear arrangement and loosened causal and temporal relations, authors risk losing a lot of argumentative power and control over their argument.

In fictional texts, the order of narrative elements is also important. Information revealed or suppressed at stages in the narrative creates suspense and can be a tool for authors to act out some control over the conclusions and predictions of readers. Authors of hypertext fiction, who stress the element of associative writing and reading [54], give up this creative tool and with this an element of control[55].

The associative network an author creates is a fundamentally individual network, and, while hypertexts are a very useful format for authors[56], it is not always easy for readers to follow and re-create these associations. Especially in fiction, which does not have the "natural" underlying logical structure that non-fictional text have, this can add to the confusion of readers.

John Slatin suggests in his essay "Reading Hypertext" that a solution would be to "treat each node as if it were certain to be the readers' next destination"[57], which in consequence means that authors would have to give up a structure that favours an

[54] I am not talking about hierarchical "tree-structure" hyperfiction here. Those texts, though often used for collaborative projects and occasionally by single authors, are more restrictive in their reading order and also less often the subject of critical and theoretical debate.

[55] But this control is not necessarily given over to the reader, who because of problems outlined above, has often very little to base predicted and informed choices on which link to choose on.

[56] A non-linear form of note-taking, based on the associative working of the mind, has been suggested and popularised by Tony Buzan, who in his books stresses the individual and personal nature of associative thinking - ideal for brainstorming and note-taking, but less suitable for sharing ideas. (Tony Buzan, with Barry Buzan, *The Mind Map Book: Radiant Thinking, The Major Evolution in Human Thought* (London: BBC Books, 1993))

[57] John M. Slatin, "Reading Hypertext: Order and Coherence in a New Medium", *College English*, vol.52, no.8 (December 1990), 870 - 883 (p.877).

organisation by personal association in favour of a more neutral, all-encompassing, maybe even depersonalised text structure. While this is a feasible suggestion for most hypertext applications (though questionable whether possible in practice), it would fundamentally contradict the personal nature of fiction. An author could not possibly anticipate every reader's association in his/her writing and make provisions for it, and in my opinion should not attempt to do so.

On the surface, hypertext seems ideal for the unlimited multiplicity that Borges' short story suggests, but further examination can identify two flaws: by trying to literally embody the concept, hypertext takes a lot of strength out of the theoretical discussion. Furthermore, by emphasising the open, indeterminate design of the hypertext, it can lead to a confusion that is too overwhelming to be consolidated. To argue that this is part of the intention, i.e. that the confusion is part of the destabilising and decentring process of the postmodern reading experience, can be misleading since the lack of obvious design prohibits identification of these strategies as deliberate.

2.2.6: Plot-branching fiction

There can be two types of labyrinths: a labyrinth can either be coherent, i.e. have a goal, a solution that can be reached via one or many different paths and possibly contain some cul-de-sacs, or it can be tangled, without a goal and with either none or many exits. The first works towards an aim, towards closure, while the second type is without a defined aim and defers closure. Moulthrop's ***Forking Paths*** is a labyrinth of the latter kind, nowhere is there a 'centre' or a satisfactory end-point; while plot-branching texts are closer to the first.

Tree-fiction[58], or plot-branching fiction (texts with a very strict organisation based on a structure resembling the branching out of trees) are at the opposite end of the scale to Moulthrop's very open, relatively unstructured and loosely organised hypertext, but still aim for a representation of the multiple narrative possibilities any narrative potentially implies.

[58] a term coined by Garreth Rees in his article with the same title: Garreth Rees, "Tree fiction", http://www.cl.cam.ac.uk/users/gdr11/tree-fiction.html (2.7.1995)

Choose your own Adventure

A typical plot-branching story consists of short sections of narrative text, typically with a decision point at the end at which the reader can opt for either of the given options and follow the links accordingly. Because of this active engagement of the reader in the decision and construction process, plot-branching fiction is often referred to as *interactive* fiction, and in this function it will be discussed in greater depth in the next chapter. The term 'interactive fiction' is usually applied to text-based adventure computer games (of the Dungeons and Dragons type), which again developed out of plot-branching children's books. Examples of these books include the well known and popular "Choose your own Adventure Series" and the "Fighting Fantasy" books, published by Puffin and numbering about 80 each. In these fantasy / science fiction game-stories, readers (armed with a pencil and dice) have to take decision at various points[59] in order to fulfil the task outlined at the beginning: kill the dragon, rescue the princess, find the wizard or similar missions:

> The mission ahead of you is extremely perilous. [...] King Salamon has briefed you on your mission and warned you of the dangers that lie ahead. One way through the Citadel is the best for you to take. If you discover it, you will be successful with a minimum of personal risk. It may take you several trips to find the easiest way through.[60]

It is interesting to note that the wrong decision (or bad luck with the dice) can have disastrous consequences and lead to the untimely death of the reader / player / 2nd-person-protagonist, who will then have to start again to find the one correct way through the labyrinth of the text. Unlike Borges' and Moulthrop's textual mazes, with an infinite number of possibilities, all of them of equal value and none of them necessarily leading to a final goal or a satisfactory sense of closure, most plot-branching fiction

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[59] Here a typical example of a passage of descriptive prose followed by the options:
"You look round the room. It is lit only by your torch. Although a fairly large room, it h little furniture in it, although a large boulder, sliced flat, resembles a table and a small rock forms a sort of stool behind it. In one corner, a pile of rocks are held together wi mad. You cannot imagine their purpose, although they support three wooden chests. Th you jump with freight as your torch lights up a large creature, seemingly made of ro itself, standing by the door. It is roughly human-shaped, although somewhat larger. Its ey are staring straight at you, but you cannot be sure it is actually *seeing* you!

Run for the other door — Turn to **237**
Attempt to speak with the creature — Turn to **357**
Move slowly towards the boxes in the corner — Turn to **200**

Steve Jackson, *The Citadel of Chaos* (Harmondsworth: Penguin (Puffin), 1983) no page numbers.

[60] Jackson, *The Citadel of Chaos,* p.23.

shares with the 'choose-your-own-adventure' books a very definite goal that the text works towards.

Plot-branching texts can be called multilinear in two respects. They develop a number of parallel, mutually exclusive strands on the narrative level but also, through their typographical presentation, work against traditional page-layout and the deeply ingrained conventions of a linear top-left-to-bottom-right and first-page-to-last-page reading order of most bound texts. While fragmentation on the level of narrative is indeed a common feature of contemporary literature, this is usually not reflected on the typographical level - while the narrative encourages fragmentation and non-linearity, the physical object of the printed book encourages a linear reading.

Raymond Queneau's "A Story As You Like It" (print)

Authors have realised this contradiction and as an example of a text that deals with this problem and offers an unusual solution I would like to discuss a short story by Raymond Queneau.[61] Path-literature was first proposed by François Le Lionnais and Jean-Pierre Énard at the 79th OuLiPo-meeting. Raymond Queneau's "A Story As You Like It"[62], first presented at the 83rd meeting, is an example of the new "combinatorics"[63] literature that the OuLiPo have a great interest in and have explored in various formats, a form that, interestingly enough and is said to have been "inspired by the presentation of the instructions given to computers". It is an example of a bifurcating text, a text where at certain decision points the reader is asked to decide between two plot developments.

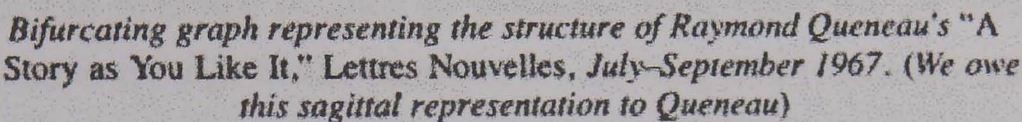
"Do you wish to hear the story of the three alert peas? If yes, go to 4. If not, go to 2" is the first question asked. If readers decide to hear the story of the three alert peas and choose "yes", they go to fragment 4 and read: "Once upon a time there were three peas dressed

[61] Queneau is a French amateur mathematician and member of OuLiPo (Ouvroir de litterature potentielle or "Workshop for Potential Literature"), a group of experimental writers in France who playfully tried to develop in their work new forms of literature. The OuLiPo authors want to explore the connections between mathematics and literature and are "conscious of working against the grain of contemporary poetics" in their embracing of a mechanistic model of poetics and the rejection of notions of the author asinspired genius and of aesthetic values.

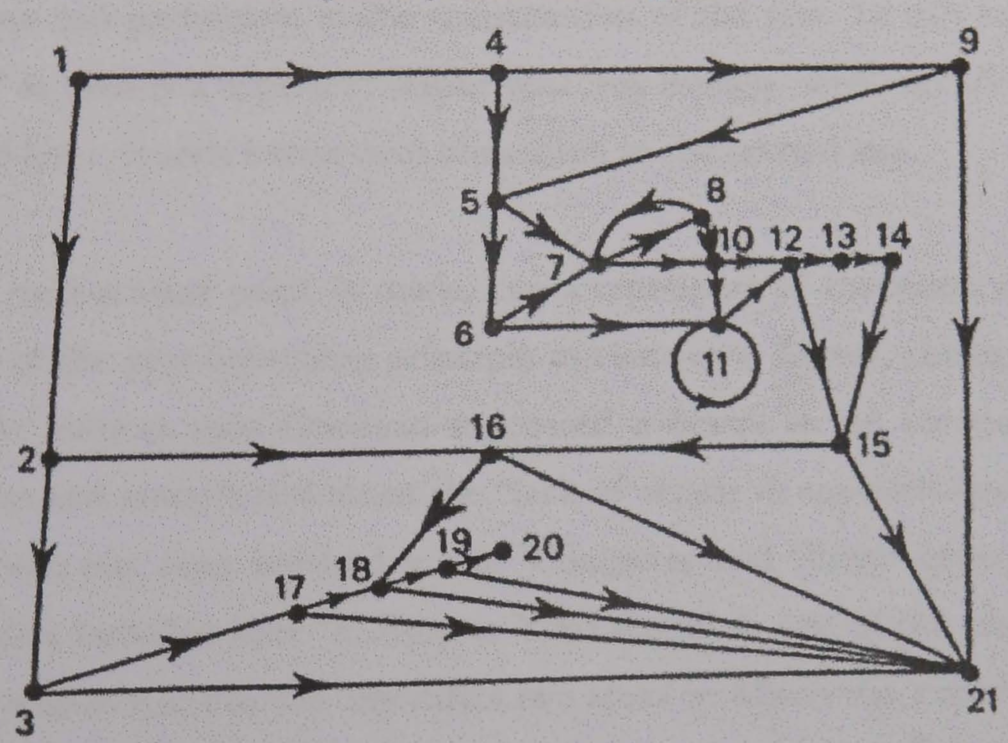
[62] ibid., pp. 163-166 ("A Conte à Votre Façon" in the French original), it first appeared in print in 1963 in *Les Lettres Nouvelles*.

[63] The term "combinatorics"emphasisesthe interest in an overlap of mathematics and literature explored by the OuLiPo; it is both a branch of mathematics as well as a term used by literary critics, such as Umberto Eco, to analyse permutational strategies in avant-garde literature.

in green who were fast asleep in their pod [...]. If you prefer another description, go to 9. If this description suits you, go to 5". If readers do not want to hear about peas they are then offered the choice of "three big skinny beanpoles" in fragment 2 (if yes, go to 16, if no, go to 3), or, if that is not good enough, "three middling mediocre bushes" (if yes, go to 17, if no, go to 21) in fragment 3. Readers who do not fancy any of these tempting options are very quickly punished for their lack of patience and interest and end up at fragment 21, which simply says: "In this case, the story is likewise finished".



Bifurcating graph representing the structure of Raymond Queneau's "A Story as You Like It," Lettres Nouvelles, *July–September 1967. (We owe this sagittal representation to Queneau)*



Even though the structure of the story offers only two choices at the end of each fragment, there soon comes a point where the sheer quantity of paragraphs to describe all the possible results becomes unmanageable, the text faces an exponential problem[64]. One decision point requires 2 following fragments, those then need 4, then 8, then 16, then 32, then 64 etc., and very soon the pure volume of text would be impossible to deal with. (An electronic version would make the storage and the handling of the text much easier, but would still not solve the problem of who is going to write all these texts in a

[64] Garreth Rees, "Tree fiction", no page numbers.

more or less coherent way)[85]

Intriguing as a story about three peas sleeping and dreaming in their pod might be, Queneau is not really concerned with the contents of his text. What he is interested in is the structure, the plot-branching and the decision points rather than the plot and the decisions. The structure of "A Story As You Like it" arguably dominates the contents; its narrative is only a vehicle for the structure Queneau developed and not vice versa. A text that emphasises the structure as much as Queneau does, turns into an "opaque" text. It never lets the reader indulge in the narrative for too long and constantly asks the reader to take decisions and participate in the construction of the text. In this sense "A Story As You Like it" is already a hypertext (hyper meaning literally "over" or "above") because it adds a second layer, it adds a structural dimension to the textual one.

But once this meta-textual point is made, can a repetition of the same experiment, a demonstration of the plot-branching principle in electronic format, enhance or expand our insights? As early as 1964 Queneau expressed a desire to use computers more in OuLiPo-projects and complained about the "lack of access to sophisticated machinery". Paul Fournel, who was then involved in the 'Computer and Writer' experiment in the Centre Pompidou includes later "A Story as You Like it" as one of the texts that would benefit from computerisation. He identifies two areas in which the computer can be a helpful tool: a)'Aided Creation' uses the computer as a tool to help creating text according to complex principles (see chapter 5 for the question of computer-generated literature) and b) 'Aided Reading' of preexisting literary material, where the computer can "perform a simple task of editing and selecting" of combinatory and algorithmic texts such as Queneau's *Cent Mille Milliard de Poèmes* or "A Story as You Like it". About the latter he says:

> In this brief text, the reader is repeatedly invited to choose what follows in the tale through a system of double questions. The elements of the narration being very short, the game dominates the reading of the text itself. This is unfortunate, since all of these possible texts have real charm. The computer first of all "speaks" with the reader, proposing the different choices to him, then prints the chosen text "cleanly" and without the questions. The pleasure of play and the pleasure of reading are thus

[85] Queneau solves this problem with various techniques of mock decisions. Some decision points lead to another one eventually, only either the direct way (12 to 15) or with a detour (12 to 13 to 14 to 15). Some do not offer any choice at all: "If you wish to know since when [peas know how to analyse dreams], go to 14; if not, got to 14 anyway, because in any case you won't learn a thing". Every path will eventually lead to the one end-point, number 21.

combined.[66]

A treatment like this shifts the emphasis from structural experiment to the production of "charming narratives", which is not in agreement with Queneau's orginal intentions. For him, OuLiPo is concerned not with the creation of original works, but with structures, theories, the proposal of new literary forms without any intention to furnish these templates with more than a few short examples[67], "A Story as You Like it" is as short as it is not because of the limitations of the print medium (the existence of the "choose your own adventure" books proves that longer texts are viable in print), but because it is just long enough to make its point. He says:

> What is the objective of our work? To propose new "structures" to writers, mathematical in nature, or to invent new artificial or mechanical procedures, that will contribute to literary activity [...]. [OuLiPo] is not a movement or a literary school. We place ourselves beyond aesthetic value, which does not mean we despise it.[68]

One simple example for the plot-branching fiction principle is sufficient for Queneau. Once his point has been made (in a very typically OuLiPoean playful manner) he does not see the need to explore or elaborate it any further[69] .

Maybe not beyond aesthetic value, but equally short and concerned more with the meta-textual reflexivity than literary expression, are a number of other examples of plot-branching fiction: Margaret Atwood's "Happy Endings"[70] and Charles Platt's "programmed comic strip" "Norman vs. America"[71]. "Happy Endings", which, despite various plot options, inevitably always leads to a conventional 'happy ending' (the

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[66] Paul Fournel, "Computer and Writer: The Centre Pompidou Experiment", in: Motte, *OuLiPo,* pp.140-142 (p.141).

[67] Warren F. Motte (ed), *Oulipo, A Primer of Potential Literature* (Lincoln and London: University of Nebraska Press, 1986) p.3 .

[68] Raymond Queneau, "Potential Literature", in: Motte, *OuLiPo,* pp.51-64 (p.51).

[69] Paul Fournel, a fellow OuLiPo-member has attempted a plot-branching play, called "The Theatre Tree", but has to admit that "[t]he problems encountered in a project of this sort are numerous, and some of them appeared practically insoluble. A 'tree' play would, more particularly, demand an almost superhuman effort of memory on the part of the actors". Alan Ayckbourne's *Intimate Exchanges* has a tree-structure with 4 decision points (after five minutes, five days, five weeks and five years into the narrative of the play) and has been skillfully transferred into a couple of films (an even more linear - no change to flick the pages back to the previous decision point, and even less interactive - no immediate audience to decide which path to follow), *Smoking* and *No Smoking.*

[70] I am grateful for Dr. Joanne Collie for pointing this short story out to me.

[71] Charles Platt, "Norman vs. America", in: ***Breakthrough** Fictioneers: An Anthology*, ed.by Richard Kostelanetz (Barton, Brownington and Berlin: Something Else Press: 1973), pp.85-90.
According to the "Notes on Contributors", Platt "has also completed a longer multi-path novella, that is still unpublished" - a work of which I could not find any further trace. (p.357)

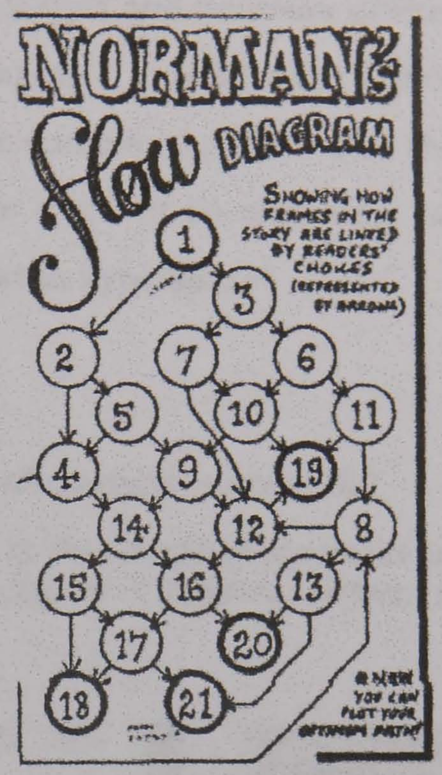
protagonist's natural death after a happy and fulfilled life and includes a comment by Atwood on the arbitrary nature of plots :

> You'll have to face it, the endings are the same however you slice it. Don't be deluded by any other endings, they're all fake, either deliberately fake, with malicious intent to deceive, or just motivated by excessive optimism if not by downright sentimentality. The only authentic ending is the one provided here: John and Mary die. John and Mary die. John and Mary die.
> So much for endings. Beginnings are always more fun. True connoisseurs, however, are known to favour the stretch in between, since it's the hardest to do anything with. That's about all that can be said for plots, which anyway are just one thing after another, a what and a what and a what. Now try How and Why.

This is a very conscious deconstruction of the "fake" of fictional choices (including the just as imaginary "authentic" ending) and an invitation to the reader to not be fooled by the 'what' of the plot, but to question on a higher lever the construction and functioning of literature. Like Borges and Queneau, Atwood is interested not in offering readers a choice between a larger number of the plot-elements, but in using a plot-branching structure to lay bare the arbitrariness and artificiality of literary decisions. And it is exactly in this point that they differ from Stuart Moulthrop and other hypertext fiction writers.

Charles Platt's comic-strip is less consciously postmodern, but, in a format resembling the "choose your own adventure" children's books, plays very humorously with both the concept of the American Dream as well as narrative conventions, while his flow-chart, that plots the structure of the text without any references to the actual narrative, could be read as satire of a formalist/structuralist textual analysis.

> There are four endings. In three of them, Norman loses his struggle against America. But in one of them, Norman succeeds. Your aim is to make choices which you think will be most likely to lead Norman through to the happy ending.
> In all, there are 67 different paths through the comic. They vary in length from five to nine frames. Of all of the 67, only 16 lead to success, riches and happiness for Norman.



"A Story As You Like It" (electronic)

An electronic version of Queneau's text exists[72], and, because it is a text originally conceived for print and then transferred, can serve to illustrate how the "same" text, and with it the readers' position and the reading strategies employed, change in a different medium.

First of all, the whole text is never present entirely, unlike in print, only the chosen node is ever visible. Present on the first screen is just the first little fragment and the Yes/No choice at the end of it, and depending on which options the reader chooses, fragment 2 or 3 appear on the screen. For the reader, this results in a sense of immediacy and confusion. The usual feeling while reading a printed text is a feeling of the past, the events have already happened and they are now being re-told and cannot be changed. Now it seems like the story is happening in the present and that decisions really have an impact on what is going to happen next. It is therefore much easier to lose track of how many decision points there have been and how many variations remain unrealised, causing diffuse (and frustrating) feelings of "lost chances". Furthermore, it is more difficult to locate oneself in the text, to know how much has or has not been read, and to

[72] This is, however, not the Centre Pompidou version, but a more recent HyperCard stack available at: `www.interstory.rrz.uni-hamburg\geschichten\Queneau\queneau8.html`.

know how far away the end is. In the print version the length and structure of the text is immediately obvious, we read in the knowledge that fragment 21 will be the last one and we know that the higher the numbers get the closer we come to the end.[73] It is therefore easier to fail to understand the macrostructure or "the map" of an electronic text and consequently there is a greater possibility of getting "lost in hyperspace" .

2.3: Multiplicity 2: Simultaneity (of viewpoints / of narrative strands)

> *Fiction is perhaps the most closely bound of all the arts to the concept of sequential time.[...] Literature can convey the passing of time because it implies a temporal aspect. (Sharon Spencer)*[74]

Visual art faces problems when it wants to represent the temporality of a process, it is a predominantly static form. Modern art has attempted in various ways to convey a sense of motion on canvas: Marcel Duchamp's *Nude Descending a Staircase* (1912) as well as the attempts of Futurist painting to capture the speed, dynamism and movement of the 20th century are probably the best known illustrations. Literature has a similar problem with the representation of simultaneity. Reading is fundamentally linear and two events happening at the same time can be conveyed in text only in succession. Electronic writing cannot solve this problem, but can help to find solutions for at least a visual representation of parallel events. On the computer screen one can have more than one text window open at the same time and can therefore create the impression of simultaneity by using parallel windows for parallel texts, and juxtapose on the screen in the same temporal and spatial framework elements that are both literally (in the computer memory) and metaphorically (on the hypertext map) stored at a spatial distance.

[73] A second example, that is not based on a print-text but an original hypertext is Rick Pryll's electronic tree-fiction *Lies*, a relatively short text with only 37 nodes, at `http://www.users.interport.net/~nick/lies` (10.10.98).

[74] Sharon Spencer, *Space Time and Structure in the Modern Novel* (Chicago: Swallow Press,1971) p.XV.

There is also the overview feature available in certain systems, that allows readers to view the whole structure of a text and the links between the individual text fragments as a network. Access to this network is often possible from a number or all of the elements. Similar to a painting, where the starting point and order of the viewing is not determined by linearity but by the free movement of the reader's / viewer's eyes.

The majority of so–called avant–garde movements of the twentieth century include both writers and visual artists who mutually explored the possibilities of each other's fields. The shift from book to screen allows writers to continue to explore questions of textual simultaneity in a new writing medium.

> *Almost from the first, [...] you start to realize that the truth is that everyone's story seems to go on without us. That the truth is the story that goes on without us. All those people everywhere, in Buenos Aires, Bengal, Bismark, South Buffalo, Austin and Kuwait, each in their own stories moving along side by side through time, their paths crossing from time to time to be sure, but going on somewhere unknown to each other like the mix of extras and real people in the background of B-movie New York sidewalk scenes. (Michael Joyce)*[75]

Print as well as electronic texts have been trying to solve this problem and found different ways to express if not all (a Borgesian impossibility) but at least some parallel developments: Philip Toynbee's *Tea at Mrs Goodmans* and B.S. Johnson's *House Mother Normal* explore different viewpoints of the same chain of events in the same space (a tea-party and a social evening in an old people's home respectively)[76] in print; Shana M. Fischer's *E-Ville Dialogues* share the same space and timeframe but collect conversations taking place simultaneously in a restaurant. Stuart Moulthrop's hyperfiction *Victory Gardens* is set during one of the most important events of recent American history, the Gulf War. His narratives, which follow a number of graduates (some in America, others in the Gulf) through the first weeks of the war, share the same timeframe but not geographical space.

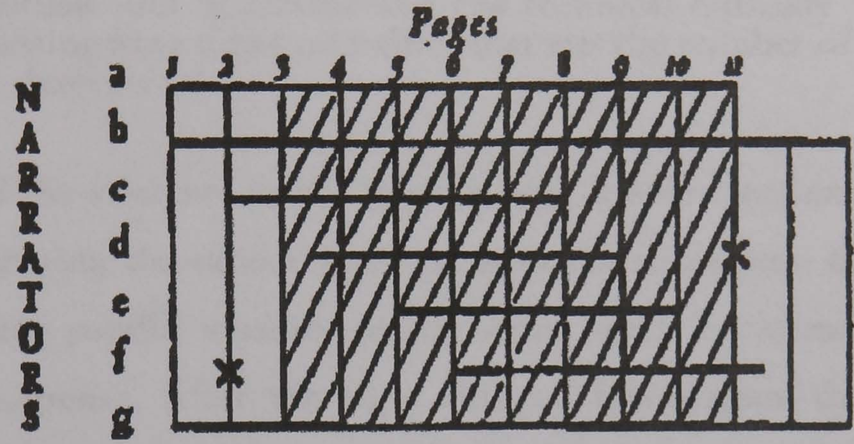
In Toynbee's novel seven narrators share with the reader their view of a tea party at Mrs.

[75] Michael Joyce, "An Introduction" to Stuart Moulthrop, *Victory Garden*, electronic fiction (Cambridge, MA: Eastgate, 1991), accompanying booklet, no page numbers.

[76] Other examples for multiple perspectives that are not as tightly organised as Toynbee's and Johnson's novels are Julian Barnes' *Talking It Over* (3 perspectives of husband, wife and lover of the same period of events) and John Fowles' *The Collector* (view of both collector and 'collected').

Goodman's, which is represented in seven separate sections covering the timespan of each of the narrator's presence in the room. The set-up of the book is described in an initial diagram and an explanatory note by the author.

> The pages are numbered both according to the period and events they describe (by the number itself), and according to the narrator (by the letter attached to the number). thus page A7 covers the same period as pages B7, C7 and so on, but each is the experience of a different person[77].



Dialogue is faithfully represented and appears in the same space on the same page in each section. What is different (and entertaining) are the different mental responses to the overheard dialogues, the sympathies and antipathies between the characters, certain hypocracies (between actual dialogue and thoughts) and the gradually unfolding characterisation of the persons present not only from their own viewpoint, but through six other observations.

In a similarly constructed arrangement, B.S.Johnson's *House Mother Normal*[78], subtitled 'a geriatric comedy', narrates a single event, a social evening in the old people's home in which it is set, through eight interior monologues of the patients and a ninth concluding monologue of the house mother. The monologues are preceded by some statistics and clinical data and are arranged by decreasing CQ-count (which is the total of correct answers to ten questions such as "Where are you now?" "What is this place?" or "What date is it?"). Each of the monologues takes up 21 pages (apart from the house mother's with 22) and covers exactly the same length of time, so that each line in each chapter corresponds exactly with the corresponding lines on the corresponding pages in the other chapters.

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[77] Philip Toynbee, *Tea with Mrs. Goodman* (London: Horizon, 1947), p.5.

[78] B.S.Johnson, *House Mother Normal* (London: Collins, 1971).

With the CQ-count decreasing, a certain confusion and incoherence sets in, which is visually represented by blank pages when a character nods off and by sections of extremely incoherent speech. Johnson himself describes the set-up and his reasons for choosing it as follows:

> What I wanted to do was to take an evening in an old people's home, and see a single set of events through the eyes of not less than eight old people. Due to the various deformities and deficiencies of the inmates, these events would seem to be progressively 'abnormal' to the reader. [...] The idea was to say something about the things we call 'normal' and 'abnormal' and the technical difficulty was to make the same thing interesting nine times over since that was the number of times the events would have to be described.[79]

The typography and the structure of the book have a double function: as well as being the means of representing the various states of inner consciousness, they also solve the problem of expressing parallel versions of the same event. Furthermore they help to build up a certain suspense. After the eight patients' monologues, the 9th, the house mother's, the only apparently 'normal' person, breaks the frame both in its contents (her narration of the evening is actually the strangest, 'unnormal' of them all) and in terms of technical construction. She is given a 22nd page on which she reflects about the nature of fictional illusion. "Thus you can see that I too am the puppet or concoction of a writer (you always knew there was a writer behind it all? Ah, there's no fooling you reader)".

"Nor should there be!"[80] remarks Johnson, referring to this particular line, and nor is there. Readers are always very aware of the fact that they are reading a book, a construct, and that any impression of simultaneity, but also of accumulated objectivity through more than one viewpoint, is an artificial impression created through the construction of the text.

> I should be determined not to lead my reader into believing that he was doing anything but reading a novel, having noted with abhorrence the shabby chicanery practised on their readers by many novelists, particularly of the popular class. This applies especially to digression, where the reader is led, wilfully and wantonly, astray; my novel would have clear notice, one way or another, of digressions, so that the reader might have complete freedom of choice in whether or not he would read them.[81]

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[79] B.S.Johnson, *Aren't You Rather Young to be Writing Your Memoirs?* (London: Hutchinson, 1973), pp.26-27.

[80] B.S.Johnson, *Aren't You Rather Young*, p.27.

[81] B.S.Johnson, *Travelling People* (London: Constable, 1963), p.12.

While the first half of the statement reflects a very typical rejection of illusion and immersion, the second reflects notions of choice to be picked up later by hypertext with an emphasis on personal choice and opportunities to ignore just as much as to choose certain links and information.

It is not very fruitful to speculate whether Johnson would have used hypertext technology had it been available to him; it is however worth noting that he saw a need for the invention of new literary constructions:

> Literary artforms do become exhausted, clapped out. Look what happened to the five-act bland verse drama by the beginning of the 19th century [...], everything that could be done with it had been done already.[82]

He observes and argues that the same applies to the 19th century narrative novel. But his reconsideration of the novel form was not only motivated by newness for the sake of newness, it was also motivated by the need to a) find a format most appropriate for the particular thought or aspect he wanted to discuss in any of his texts (in House Mother Normal e.g. the false impression of objectivity of multiple viewpoints) and b) more generally find forms more appropriate for present-day reality than what he saw as the false "make-belief" form of the traditional narrative novel:

> The novelist cannot legitimately or successfully embody present-day reality in exhausted forms. If he is serious, he will be making a statement which attempts to change society towards a condition he conceives to be better, and he will be making at least implicitly a statement of faith in the evolution of the form in which he is working [...] Novelists must evolve (by inventing, borrowing, stealing or cobbling from other media) forms which will more satisfactorily contain an ever-changing reality, their own reality and not Dickens' reality or Hardy's reality or even James Joyce's reality.[83]

An interesting statement that strongly argues the need for change and invention, but is also based on a belief in the novel form and an emphasis on evolution within this form. Johnson's innovation is innovation with a view of the past and innovation with a purpose, and not just newness for the sake of it. It is very typical for new artforms (as with hypertext) or, in fact, with old artforms in a crisis (as with the novel) to reject the past in order to find unique and appropriate fresh forms of expression - even though they are ironically always deeply rooted in the old form that they attempt to supersede. Johnson

[82] Johnson, *Aren't You Rather Young* ,p.13.

[83] ibid, p.16.

acknowledges this and is very aware of the tradition he works in. Hypertext fiction, on the other hand, is currently still going through a rejection process, which is partly motivated (as discussed in the introduction) by the perceived newness of its medium, and its formal experiments appear not so much motivated by narrative need but by the fact that they "can be done ".

E-Ville Dialogues

Shana M. Fischer's *E-Ville Dialogues* is an electronic text that takes up the question of simultaneity and tries to accommodate in a hypertext structure all the conversations that take place in the E-Ville Restaurant and its kitchen simultaneously.

The dialogues are preceded by a "BEGINNING", which frames the main text and strongly resembles stage directions:

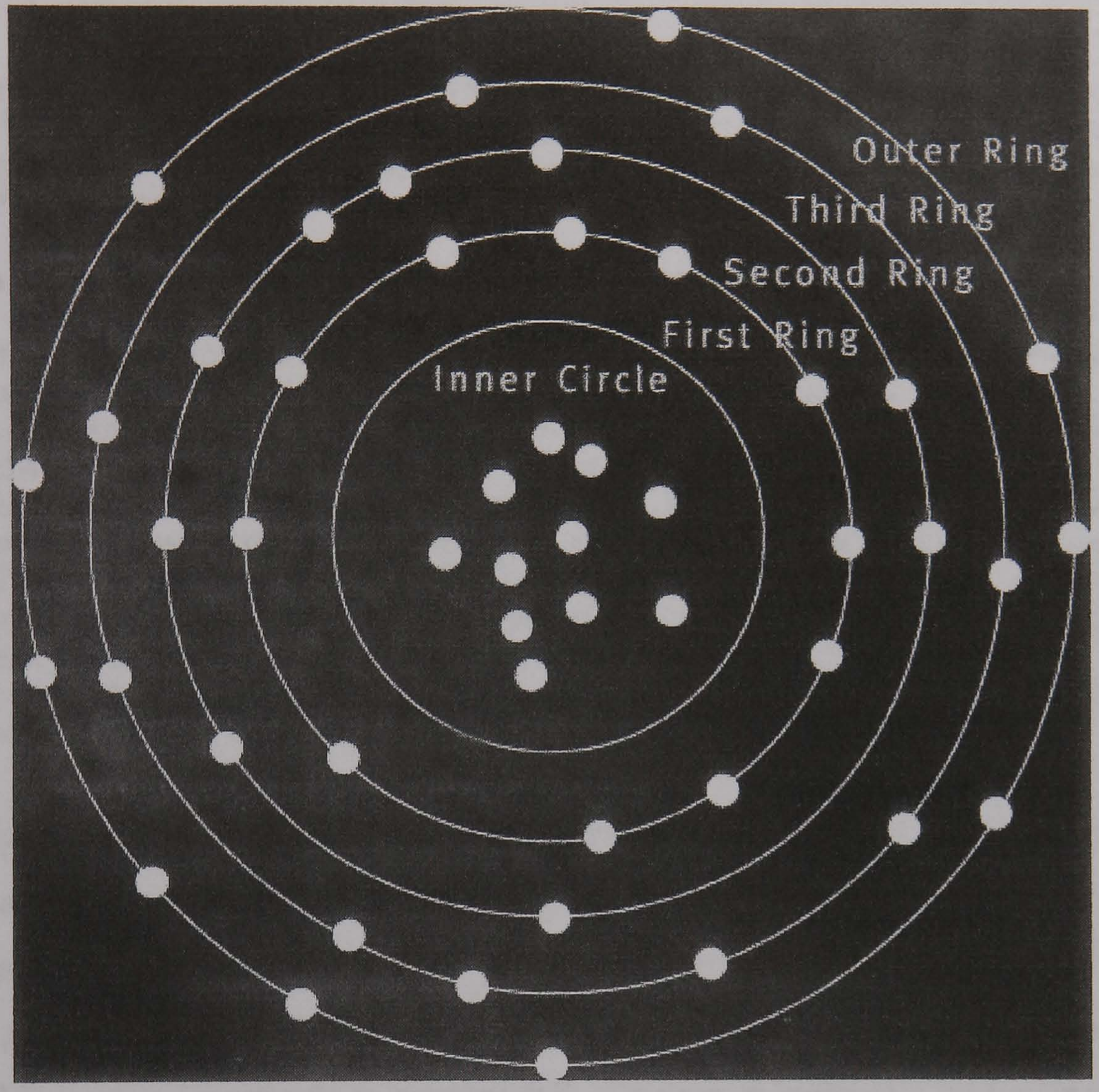
> P. is stretched out on a big red velvet chair in front of a large fireplace. P. has just consumed an unusually hearty dinner and is sitting alone with his feet up on a small foot stool. [...]In front of P. is a small table which P. had rolled up to the fire place moments before. On the table are some desserts (not very special), some bottles of wine, spirit and liqueur. P. had been reading some banal books which are littered over the table and and the floor around the red chair.
> P. takes a sip of a drink and turns on the television across from him. P. picks up the remote control and searches around for something interesting. P. settles on a restaurant scene on the television screen. It looks as though the people on the screen are just beginning to eat as waiters come to the tables and put food down in front of each diner. The people at the table are talking or arguing rather intensely. The are drinking and smoking and talking etc. P. takes another sip of a drink from the table, leans back and stretches out in the chair.

This initial scene, a rather obvious parallel to the reader of the *E-Ville Dialogues*, who has also left the "rather banal books" behind and follows the on-goings on the screen, albeit the computer screen instead of the television and on an office-chair instead of the comfort of an armchair by the fireplace. This self-reflexivity sets the tone for what is to come: highly philosophical reflections, most of which can be directly interpreted as a comment on electronic text and the viability of this project.

> All of the people in The Restaurant look the same and are all doing the same thing. Each table looks the same, with the same amount of people all doing the same thing-finishing their meals, talking, drinking etc. There are an array of conversation types in The Restaurant. The conversations vary from just casual conversation to the compilation of books and essays. Some of the more interesting arguments may become books. After much discussion, the diners usually spend a fixed amount of their time in The Restaurant making books for my libraries.[84]

[84]Shana Fischer, *E-Ville Dialogues*, `http://www.itp.tsoa.nyu.edu/~shana/Dialogues/rest.html`.

The tables are organised on an imagemap[85] of concentric circles and can be accessed by a mouse-click in any order.



Each page ends with an option either to go back to the map or to "interrupt the conversation", with the opportunity to send a comment / contribution referring to this particular element to the author. And the end of the whole text, at THE END, we can, while dessert is being served in the restaurant, eavesdrop on the conversation at table #59 concerned with questions of, amongst others, the relation between form and content and parallelism - both important in the context of the project. The highly self-referential conversation at this table starts as follows and because it is being introduced as a "background conversation" sets the theme for much of the E-Ville Dialogues:

> Eavesdropping on the conversation at Table #59 (background conversation):
>
> Person #1: The question one could pose in relation to you and the isomorphism is, how was an arrangement thought of in relation to the arranged features?

[85] http://www.itp.tsoa.nyu.edu/~shana/Dialogues/tab1.html

Person #2: The conception of Logos discusses the interconnectedness between words and their arrangements and things and their arrangements. The examination of fragments may help us understand what makes the x and x' parts of the isomorphism.

Person #3: Echoes are created within the fragments from various linguistic 'devices' like parallel construction and overlapping contradictory images. Such 'devices' create deliberate or intentional ambiguity within the sentences. Parallelism is a rhetorical 'device' which creates echoes.

Person #2: Can you explain what you mean by 'parallelism?'

Person #4: Fundamentally, parallelism was an ancient linguistic mnemonic device used mainly by orators. To produce the echo, the mind and ear must be signaled to anticipate x' by hearing x, and know that the expectation will be fulfilled. Parallelism operates on the principle of anticipation, whereby, the reader is 'led on' in a relationship from one sentence to an other as a series of connections are formed by a series of associations. The reader's mind is led from x to x' because it knows something in x will be echoed or duplicated in x'. Hermeneutical devices such as the pairing of antithetical terms give the effect of internal echoes produced by a fragment's self-duplication. For example: antithetical parallelism: Fr. 30: 'Harmony visible over invisible prevailing.' Or Fr. 8: 'He who does not expect will not find out the unexpected, for it is trackless and unexplored.'

While Toynbee and Johnson use the page (time in story represented by space of page) and pagination as an organising feature, a principle that is immediately understandable and grasped by the reader, the lack of physical presence and clearly defined text space make this task for difficult for Fischer. The *E-Ville Dialogues* use visual metaphors instead: both the TV-screen image of a restaurant full of diners at individual tables describes and the image map to access them visually represents the parallel structures. There is, however, no narratological necessity for the hypertext structure, it is a vehicle for a collection of only loosely related fragments, rather than, as is the case with Johnson, a format consciously chosen to connect the individual texts into a meaningful arrangement.

Completeness - Incompleteness

By forcing the reader constantly to make choices, the plot-branching fiction discussed earlier makes its readers acutely aware of the alternative possibilities that they may not realise in their particular reading, a fact which is emphasised in electronic text by the lack of the tangible presence of the text as a physical whole. The <u>completeness</u> of the individual realisation stands against the <u>incompleteness</u> in the light of the non-realisation

of the other possibilities as observed by Eco in the context of contemporary open works of music:

> Every performance makes the work an actuality, but is itself only complementary to possible other performances of the work. In short, we can say that every performance offers us a complete and satisfying version of the work, but at the same time makes it incomplete because it cannot simultaneously give all the other artistic solutions which the work might admit.[86]

The novels concerned with simultaneity discussed above are concerned with a related aspect. Johnson's and Toynbee's texts both work towards a feeling of completeness: a punchline in the last chapter that makes the preceding appear in a new light, and they can do so because of the inevitable physical closure of the printed book. But they are at the same time hinting that this closure can never really be achieved, any number of different views could be added and the complete, "real", objective version would still not be possible to achieve. Similarly, in Fisher's restaurant readers can choose to go to "the END" at any time, but could equally read on and furthermore the text could be expanded by a few tables and conversations.The 'end' is an arbitrary and temporary one, other facets and elements are always a possibility. This is another aspect of the completeness / incompleteness tension, the phenomenological problem of the subjectively perceived completeness of one's worldview versus the objective impossibility to ever perceive all aspects of our surroundings and grasp it completely.

2.4: Mosaic narratives

The second category of non-linear narratives Douglas proposes is that of Mosaic narratives. They, she argues

> consist of narrative fragments, conflicting perspectives, interruptions and ellipses that impel their readers to painstakingly piece together a sense of the narrative, with its full meaning apparent only when viewed as an assembled mosaic, a structure embracing all fragments.[87]

I would, however, suggest another, more contemporary, metaphor which I believe is, though equally taken out of the realm of visual arts, more appropriate: that of the collage. While mosaic implies the use of homogeneous material, collage juxtaposes material from

[86] Umberto Eco: "The Poetics of the Open Work", *Twentieth Century Studies*, no.2 (1974), p.19.
[87] Douglas, *Print Pathways*, p.65.

often widely different sources; and while in a mosaic the individual parts only find their aesthetic value as part of a whole, the fragments in a collage are taken out of a prior context and have a meaning on their own, which is changed, enhanced or contradicted through the new context they are put in in a collage. Furthermore, while a completed mosaic gives the impression of a planned and completed whole, collage is a more open form, always open to additions and reinterpretations.

Both terms stress again the relation between hypertext literature and principles of art, here, however, not emphasising aspects of simultaneity, but of fragmentation and of a 'non-linear' organisation and the resulting 'non-linear' reading processes, processes resembling the perception of a painting. Pictorial perception has the same temporal processing that linguistic perception has "with the difference that the ordering of this perceptual sequence is not predetermined by the painting itself"[88]. This is directly mirrored in the claim that hypertext reading is "guided by association".

2.4.1: Parataxis vs. Hypotaxis

Derek Malmgren distinguishes between texts that organise their material predominantly syntactically, i.e. in a "left-to-right, top-to–bottom syntactic articulation, page-to-page continuity, and textual irreversibility" and the promise of coherence and closure, or paratactically, arranging relatively discrete and autonomous story elements in a textual "compositional space".

> The text deconstructs conventional notions of textuality and demands that the reader assumes a more active role in narrative management. The reader must create his or her own reading order for the narrative (the novel-in-a-box) or imaginatively construct (not reconstruct) the segmented fragments of the text into a satisfactory whole.[89]

The first he attributes to traditional narratives, that organise their material in a relatively linear fashion, with relative closure and temporal as well as causal coherence and achieve the illusion of a self-contained whole within the grasp of the individual. Though it inevitably leaves gaps in the narrative (not every thought or event can ever be described), the text gives enough framework material and structure to allow the reader to fill them in

[88] Wendy Steiner, *Colors of Rhetoric* (Chicago: Swallow Press,1982) p.36.

[89] Derek Malmgren, *Fictional Space in the Modernist and Postmodernist American Novel* (Lewisburg: Bucknell University Press, 1985), p.48.

without greater disturbance. Examples of paratactic texts, of a spatial arrangement[90] can be found in modernist and postmodernist literature; they continuously challenge this notion and have opted for a more fragmented narrative structure, on the level of narrative (or deep structure) as well as on the surface level of physical presentation - a kind of (inter)textual collage.

> *The idea of collage linkage implies discontinuity and the value of the collage fragment in itself, beyond any system. Causal narrative implies continuity and wholeness, but with the constant threat of discontinuity and fragmentation. Non-causal narrative implies discontinuity and fragmentation reaching towards continuity and wholeness, which seems more appropriate to a time when mystiques and their processes are laid bare. (Ronald Sukenick)*[91]

Collage is one of the central artistic techniques of the 20th century, mainly because of its emphasis on fragmentation and the relations it proposes between textual and visual art forms, art and reality, and the position of the artist in relation to his/her work. Though commonly thought of as belonging to the realm of the visual arts, it can be found equally in literature, and in fact is an area where the distinction between visual and textual art frequently collapses. Steve Katz includes maps, advertisements, drawings and photos in his *The Exagggerations* [sic] *of Peter Prince*[92], Alan Burns' *Dreamerika!*[93] is a mixture of different typefaces in different sizes together with photo-collages. B.S.Johnson's *See the Old Lady Decently*[94] includes facsimiles of letters both typed and handwritten etc.. The examples in which the visual intrudes into the dominantly textual are numerous.

An equivalent opposite development can be observed in the visual arts: Futurist and Dadaist collages include newspaper-clippings, leaflets and all sorts of written ephemeralia; they include the textual in the dominantly visual. They approach the art-literature border from the other side and in the end both parts achieve a state where it is no longer possible to clearly distinguish between what is still art and already literature and

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[90] for a discussion of spatial forms in narrative see Malmgren's own work, but also: Joseph Frank "Spatial Form in Modern Literature" in: *The Widening Gyre: Crisis and Mastery in Modern Literature* (New Brunswick, New Jersey:Rutgers University Press, 1963) - a discussion of spatial form and modernism; Sharon Spencer, *Space, Time and Structure in the Modern Novel* (New York: New York University Press, 1971) - who uses the term "architectonic" instead of spatial or paratactic; and Jeffrey R. Smitten and Ann Daghistany (eds.) *Spatial Form in Narrative* (Ithaca: Cornell University Press, 1981).

[91] Ronald Sukenick, "12 Digressions Toward a Study of Composition",*New Literary History,* vol.6. no.2 (Winter 1975), 429-437 (p.437).

[92]Steve Katz, *The Exagggerations of Peter Prince* (New York, Chicago, San Francisco: Holt, Rhinehart & Winston, 1968).

[93] Alan Burns, *Dreamerica! A Surrealist Fantasy* (London: Calder and Boyars, 1972).

[94] B..S. Johnson, *See the Old Lady Decently* (London: Hutchinson, 1975).

vice versa. The nature of digital media, i.e. the ease with which visual and textural formats can be mixed in multimedia documents further encourages this amalgamation of artforms.

In the collage-form, that takes preexisting bits and rearranges them anew, the postmodernist idea of intertextuality finds its reflection on a visual level. This outside material included in literary texts can be of a visual character, but can, however, also be fragments of other texts[95] . Franz Mon, a German poet strongly related to the post-war Concrete Poetry movement, argues in his essay "collage in der literatur" that textual collages have become possible because of the "entleerung der sprache", the emptying of language that, through constant repetition in modern society in slogans, songs, idioms, overused metaphors - has lost some of its meaning and can now be put into unfamiliar context in which the will still be recognised as stereotypes but perceived afresh.

> *The collage revolution brings to an end the age-old separation between the realm of art and the realm of things. With collage, art no longer copies nature or seeks equivalents to it; an expression of the advanced industrial age, it appropriate the external world on the basis that it is already partly changed to art. (Harold Rosenberg)*[96]

A collage establishes an interesting relation between art and reality. Bits and pieces of reality (and quotations, even though one could argue that they are taken from the realm of fiction, are "reality"; they preexist the author's imagination and definitely have a physical reality in books, magazines and newspapers) form a "new reality" that has no equivalent in nature and is therefore non-mimetic but adds "another reality" to the world[97].

[95] In *Berlin Alexanderplatz*, Alfred Döblin places announcements, weather reports, adverts, signs etc. into (or rather outside of) the narrative context to write one of the first novels to express the sensory (over)stimulation of metropolitan life. Butor's *Mobile* combines details of American history, place names, nature descriptions and quotes from books, catalogues and newspapers to create his "Étude pour Représentation des États-Units", Burroughs' random cut-up method - which is reminiscent of Tristan Tzara's dada random poetry and ultimately of Lautreamont who first famously described the ideal of modern literature as a change meeting on an operating table of an umbrella and a sewing machine - is a credo for modern writing (and art) in which the seemingly unrelated is juxtaposed for aesthetic surprises and new contexts.

[96] Harold Rosenberg, *Art on the Edge* (London:Secker and Warburg, 1976), p.174.

[97] This has been discussed by Brian McHale, *Postmodernist Fiction* (New York and London: Routledge, 1987), and also by Ronald Sukenick, who has concisely summarised this notion as follows: "Rather than serving as a mirror or redoubling itself, fiction adds itself to the world, creating a meaningful 'reality' that did not previously exist. Fiction is an artifice but not artificial." It is a characteristic of postmodernist fiction that it doubts distinction between 'fiction' and 'reality'. Fiction can not and does not want to be a mirror of reality, but rather creates new fictional realities, that do not have an inferior status, but are on the same level as 'real reality'.

Collage opens art to the common stuff of life. (Harold Rosenberg)[98]

Collage artists use randomly collected material from different sources in their collages and select their material without any respect for the distinction between the trivial and the serious. In Dada collages bus-tickets may be placed next to newspapers, Raymond Federman discusses noodles and toilet-paper as well as Derrida[99]. Collage is an open system; its boundaries are arbitrary, new pieces can be added anytime. They do not have a fixed margin, they appear to be open, improvised, "in process", and decisions about what their result will be are taken by the creator as he/she goes along.

Collage is somehow the archetypical postmodern artform because of its eclecticism, its pluralism of technique and reference, its mixing of categories and genres and its conscious, though playful acknowledgment of the past and the lack of pretence that anything truly original can ever be produced.[100]

And collage is also, and perhaps even more so, an ideal format for electronic (hyper)text - though not so much because it fits a consciously chosen strategy, but more as an inevitable factor of the medium's construction. The presentation on screen favours self-contained units of text (or images), while the possiblility to link these units multiply faciliates their juxtaposition in new contexts. Links to 'outside' texts are not only possible, but somehow the essence of the concept hypertext: an increasing amount of information is available in digital form and can be included into any document without a noticable transgression (but rather a dissolution) of their borders.

Christopher Butler has identified two major tendencies of avant-garde art (visual art, music and writing): those works that are organised by some organising principle (in fiction that means other than the internal logical or temporal organisation of the narrative) or those not organised at all, but dominated by chance, organised at random.

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[98] Rosenberg, p.174.

[99] Raymond Federman, *Double or Nothing* (Chicago: Swallow Press, 1971).

[100] Umberto Eco describes postmodernism as an era of "lost innocence" in: Walter Jencks, *Post-Modernism*, London: Academy Editions, 1987, p.21) and means that postmodernists are acutely aware of accumulating traditions they work in - unlike other avant-garde movements, which radically rejected their predecessors to start something new (and therefore better). Or, as B.S.Johnson puts it:

> When I sit down to write a bloody novel I've got to make certain assumptions about the function of the novel now in relation to every novel that's ever been written. No one can write the same after Ulysses. Ulysses changed everything!
> (in: Burns, Alan and Sugnet, Charles (eds.), *Imagination on Trial*, London:1981 p.93)

For the textual collage / mosaic, both in print or as hypertext, the same broad distinction can be applied.

2.4.2: Textual Collage: organised according to a ruling principle

A number of organising principles external to the narrative have already been mentioned: B.S. Johnson's decreasing CQ-count; the spatial metaphors of many hypertexts such as the restaurant layout (E-Ville Dialogues), the garden (Stuart Moulthrop's *Victory Garden*), the house (John McDaid's *Uncle Buddy's Phantom Funhouse*), the hotel (the collaborative fiction *Hypertext Hotel*) or the city (*Stories from Downtown Anywhere*), and in print text centred around images (Calvino's *The Castle of Crossed Destinies*) or dates (though not necessarily in the chronological order of the diary). One of the most common attempts in print, however, to organise text-nodes and discouraging a front-page-to-back-page linear reading in favour of a more open, collage-like, juxtapostional approach is the organisation according to the alphabet (a recent example is Sebastian Faulks' *A Fool's Alphabet*) - most notably the encyclopaedia format.

Encyclopaedia novels

> *The order of pages in a book is fixed at the time of binding, text is arranged to run from one page to the next, and, with the important exception of reference books, the reader is expected to move through a book in that order (Jay David Bolter)*[101].

Though I would not agree that the reference book is the only type of book in which a reading order other than the conventional is encouraged or necessary (and part of the aim of this thesis is to show some of these other texts), the encyclopaedia form plays an important part in the project of non-linear collage narratives and deserves to be looked at further.

Calvino argued in 1967 in his essay "Cybernetics and Ghosts", that both the development of formalist and structuralist literary theory as well as new "combinatorial" narrative forms of the *nouveau roman* and the Tel Quel group can be traced to the same source. Namely a perception of the contemporary world no longer as continuous ("fluid, evoking linear images such as a flowing river or an inwinding thread", reflected in a linear narrative structure), but rather as discrete, as made up of separate parts ("a series of

[101] Bolter, *Writing Space*, p.41.

discontinuous states").[102]

Nowhere is this fragmentation, and also the desire to organise and interconnect the fragmentation, more apparent than in the encyclopaedia, in which atomised knowledge (the individual, discrete subject entries) is collected into a whole body of knowledge. Completeness is achieved through fragmentation. How to arrange these fragments has always been a problem makers of encyclopaedias have had to struggle with; they can be arranged either systematically by subject or in a simple, but random, alphabetical order, which, by virtue of the meaningless initial letter, brings together unconnected and separates connected entries. The alphabet of the encyclopaedia is a "randomising principle", one of disorganisation rather than organisation, which can only be overcome by constant cross-referencing[103].

This alphabetical arrangement, though most widespread in contemporary encyclopaedias such as the *Encyclopaedia Britannica*, has not been without criticism, and over the decades a large number of alternative, systematical schemes have been suggested by figures such as Francis Bacon or by Samuel Taylor Coleridge[104], who had nothing good to say about alphabetical arrangements:

> To call a huge, unconnected miscellany of the omni scribile, in an arrangement determined by the accident of initial letters, an encyclopaedia, is the impudent ignorance of your Presbyterian bookmakers.[105]

Some thinkers of the 20th century, however, became unhappy with either format, because simply collecting increasing amounts of information, even with an index, seemed increasingly unfeasible and undesirable. The focus of encyclopaedia theorists started to shift, and the question arose of not how to find an appropriate way to organise

[102] Italo Calvino, "Cybernetics and Ghosts" in: *The Literature Machine: Essays*, transl. by Patrick Creagh (London: Secker and Warburg, 1987), pp.3-27 (p.8).

[103] This alphabetical arrangement only makes sense in print. Janet Murray observes in her essay entitled "The Pedagogy of Cyberfiction": "There is no reason to present things on the computer in alphabetical order, since it will do the searching for you [...]. Alphabetising is actually a randomising strategy; rather than a principle of organisation it is a principle of disorganisation. (Janet H. Murray, "The Pedagogy of Cyberfiction: Teaching a Course on Reading and Writing Interactive Narrative", in *Contextual Media: Multimedia and Interpretation*, ed.by Edward Barrett and Marie Redmond (Cambridge, MA: MIT Press, 1995), pp.129-162, (p,141).)

[104] for a comprehensive history of encyclopaedias and schemes of organisation see: Robert Collison, *Encyclopaedias: Their History Throughout the Ages* (New York and London: Hafner, 1964).

[105] quoted in: Myron Tuman, *Literacy Online* (Washington, D.C., London: Falmer Press, 1992), p.52.

the whole body of knowledge, but of how to make a relevant selection of it available.

Collinson quotes H.G.Wells, who in 1936/7 pointed out the need for a new type of encyclopaedia, which he suggested should be called the 'World Encyclopaedia', to cope with the intellectual and practical needs of the twentieth century. "Wells emphasised that there was no necessity for encyclopaedias to be composed of 'special articles rather hastily written, in what has been the tradition of Encyclopaedias since the days of Diderot's heroic effort'. Instead, he suggested that [...] the World Encyclopaedia should comprise 'selections, extracts, quotations, very carefully assembled with the approval of outstanding authorities in each subject, carefully collated and edited and critically presented. It would not be a miscellany, but a concentration, a clarification and a synthesis.'"[106]

A similar argument can be found in Vannevar Bush's proposal of his memex machine, in which he argues that with the help of his machines readers could build up personal trail-like networks through the information:

> Wholly new forms of encyclopaedias will appear, ready-made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified. The lawyer has at his touch the associated opinions and decisions of his whole experience, and of the experience of friends and authorities. The patent attorney has on call the millions of issued patents, with familiar trails to every point of his client's interest. The physician, puzzled by its patient's reactions, strikes the trail established in studying an earlier similar case, and runs rapidly through analogous case histories, with side references to the classics for the pertinent anatomy and histology. The chemist, struggling with the synthesis of an organic compound, has all the chemical literature before him in his laboratory, with trails following the analogies of compounds, and side trails to their physical and chemical behaviour.[107]

The objective, all-encompassing nature of an encyclopaedia is replaced by a more subjective, individual approach; and in this light the encyclopaedia format becomes feasible for fiction. At first view encyclopaedias and fiction appear to be opposite extremes: while the former represents a static cross-section of information, the latter implies conventions of temporal narrative development, and while the former is based on the impersonal nature of factual knowledge, the latter embodies the deeply personal nature of experience. But in the above context, the encyclopaedia novel appears as a

[106] Collison, *Encyclopaedias*, p.17.

[107] Bush, "As We May Think", no page numbers .

logical step further, not only a personalised collection of preexisting material, but a personal creation.

Using the random order of the alphabet for a fictional text also makes a very direct statement about the fictionality of a literary text and the arbitrariness of any order that - while it might appear as the only possible, "natural" order to the reader -is always constructed by an author. "One must find some structure, even if it be this haphazard one of the alphabet" says Gilbert Sorrentino in *Splendide Hotel,* a collection of alphabetically ordered short reflections on each letter of the alphabet, in a self-reflexive and anti-illusionist manner typical of postmodern fiction.

A number of authors[108] have chosen an alphabetical encyclopaedia arrangement for a novel, most notably Miroslav Pavic, whose *Dictionary of the Khasars*[109], has been mentioned a number of times in the context of proto-hypertexts, and Andreas Okopenko's *Lexikon einer sentimentalen Reise zum Exporteurtreffen nach Druden*[110] (Encyclopaedia of a sentimental journal to an exporters' meeting in Druden). While the first has been suggested as a suitable candidate for a computerised version[111], this work has so far not been attempted, while Okopenko's novel has inspired an "Elektronischer Lexikon-Roman", a CD-ROM based on the book but expanded (by an interdisciplinary artists' group that includes Okopenko himself) into the realm of multimedia to include photos, images and music in the format of a self-generating "Lexikon-Sonate" that develops in reflection of the individual readers reading-behaviour.

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108 These include Richard Horn's novel *Encyclopaedia* (New York, Grove Press: 1969), which is unfortunately out of print, not available through inter-library-loan from any UK Library. "It is indeed a novel in encyclopaedic form...it can be read a-z or jumping back and forth...guided by cross-references."...says Michael Grimes, who kindly provided this reference. In David Grossmann's *See Under: Love* the final part - "The Complete Encyclopaedia of Kazik's Life" (pp.302-452) - is written in encyclopaedia format. (London: Jonathan Cape, 1990).

109 Milorad Pavic, *Dictionary of the Khazars, A Lexicon Novel in 100.000 Words*, Female Edition (London: Hamish Hamilton, 1988) /*Dictionary of the Khazars, A Lexicon Novel in 100.000 Words, Male Edition* (London: Hamish Hamilton, 1988).

110 Andreas Okopenko, *LEXIKON einer sentimentalen Reise zum Exporteurtreffen nach Druden ROMAN*, (Frankfurt/M, Berlin und Wien: Ullstein, 1983).

111 for example: Janet Murray, "The Pedagogy of Hyperfiction', p.140; Moulthrop "Hypertext and the Hyperreal", *The Electronic Labyrinth* at: http://www.ualberta.ca/~ckeep/hfl0239.html; Howard Becker, "A New Artform: Hypertext Fiction" at: http://weber.u.washington.edu/~hbecker/lisbon.html; Gordon Howell, "Hypertext meets Interactive Fiction", p.137.

Dictionary of the Khazars

The first example is Miroslav Pavic's *Dictionary of the Khasars* which involves not just one but three A-Z encyclopaedias that are a replica of a long lost document (or at least that is what the rather elaborate fictional "editor's note" wants to make us believe) that covers the history and cultures of the Khasars, a tribe that disappeared from history towards the end of the Dark Ages and about which not much is known or remains. The three encyclopaedias bring together the Islamic, the Christian and the Jewish elements of the culture and not only are they cross-referenced within themselves, entries also refer to parallel or other relevant entries in the other two dictionaries. Furthermore the book is available in a "male" and a "female" version with only one paragraph different but with a number of references in each book to "the other book" that is needed to get a complete impression.

This network of intratextual relations is enhanced by the intertextual references to other (now lost) texts, stories, myths and songs as well as the textual history of the present version of the dictionary:

> It can be read in an infinite number of ways. It is an open book, and when it is shut it can be added to: just as it has its own former and present lexicographer, so it can acquire new writers, compilers, and continuers. (p.11)

This emphasis on the open character of the text which resembles Eco's distinction of open vs closed text (discussed further in the next chapter), and on the infinite number of reading paths through the text are shared by authors of hypertext fiction and can explain the status of proto-hypertext that it has acquired.

Robert Coover stresses the spatial character in his review:

> There is a tension in narrative, as in life, between the sensation of time as a linear experience, one thing following sequentially (causally or not) upon another, and time as a patterning of interrelated experiences reflected upon as thought it had a geography and could be mapped.[112]

It is interesting to note that Coover, unlike Pavic, uses the metaphor of the map again, that has become so vital in hypertext. Pavic makes use of other metaphors instead: the

[112] quoted in Landow, *Hypertext*, p.107.

set of cards or the game of dominoes (p.13), a crossword puzzle (p.11) and above all, the dictionary - emphasising both the readers' (somewhat playful) participatory role in constructing the narrative, and the fragmentary nature of the text.

> Thus, the reader can use the book as he sees fit. As with any other lexicon, some will look up a word or a name that interests them at the given moment, whereas others may look at the book as a text meant to be read in its entirety, from beginning to end, in one sitting, so as to gain a complete picture of the Khazar question and the people, issues, and the events connected with it. [...] - Each reader will put together the book for himself, as in a game of dominoes or cards, and as with a mirror, he will get out of this dictionary as much as he puts in [...]. After all, this book need never be read in its entirety; one can take half or only a part and stop there, as one often does with dictionaries. (p.13/14)

Lexikon einer sentimentalen Reise zum Exporteurtreffen in Druden

Andreas Okopenko is an Austrian novelist who has strong links with H.C.Artmann and other members of the "Vienna Group" of experimental authors that first appeared in the 1950s. His lexicon-novel (written in 1970) has a "user's manual"[113] on the first few pages, where Okopenko explains how he wants his readers to use this book. It should be used as raw-material, and "it would be nice if you take it and d.i.y. your own novel with it. The sentimental journal has yet to be taken". The novel, or better in this context, the many potential novels, is arranged strictly from A-Z, with entries on roads, beer, castles, pubs (21 of them), waitresses (7), boring towns (15) and all the other usual ingredients of a business trip, as well as more philosophical thoughts on eclecticism, afternoon chats, reasons for torturing cats and tolerating mistakes, and reflections on the nature of language and writing in general and this novel in particular.

This is not a novel, it is rather the inventory of possible novels, the actual realisation of which is up to the individual reader. Each element, each small paragraph, is discrete and self-contained, but also embedded in a network of references that give it a different meaning depending from where and when it is approached. "Ich will die Dinge in der Einmaligkeit ihrer Kombination darstellen" (I want to represent things in the uniqueness

[113] Maybe the reason why experimental fiction / electronic experiment has not found a large readership is the need for "reading instructions". This emphasises the technological artificiality of the medium (an effective defamiliarisation strategy especially in print - which has become so natural that it is not perceived as a technology anymore) and stands in the way of the fluid, uninterrupted reading process.

of their combination), says Okopenko[114] and where better can he do this than in an encyclopaedia, where seemingly self-contained elements contain in the reading process always a trace of the elements read before - where one comes from is always contained in where one is. Reading and interpreting any text is, of course, always a cumulative process; the difference here is that the order in which the elements are read is countless and governed by choice as well as serendipity rather than any order given in the text. Okopenko creates a new form of novel, a potential novel that is tightly structured while at the same time open to aleatory processes.

Readers can start anywhere they want and browse through the book at random, or read it following the cross-references. Whichever way is chosen, the readers themselves will have to piece the various elements together to create their version of the journey. The only place from which readers are not encouraged to start is the first entry on the first page; under **A** they will find:

> Sie sind es gewohnt, ein Buch - unter Umgehung des Vorwortes - von vorn nach hinten zu lesen. Sehr praktisch. Aber diesmal schlagen Sie, bitte, zur Gebrauchsanweisung zurück, denn ohne die werden Sie das Buch nicht zum Roman machen. Ja: dieses Buch müssen erst Sie zum Roman machen. Im neuen Theater spielt das Publikum auch mit. Warum nicht auch im neuen Roman. (p.9)

This small extract, which could be supported with others from the book, already summarises the points Okopenko is interested in: reader involvement, the conventions of traditional narrative and its "linear" beginning-to-end construction, that does not seem to be an equivalent of modern day chaotic life, which is represented much more accurately in the juxtaposition of heterogeneous elements and the mixture of chance and logic of the lexicon.

The choice of the lexicon format is, however, not only a formal language experiment. In contrast to the experiments of concrete poetry (a movement with a strong base in Vienna at around the same time he started work on his *LEXIKON*), Okopenko is not interested in achieving a pure form of language that excludes any trace of subjectivity but believes in the expressive potential of language. He chooses the encyclopaedia as a

[114] (in an interview with Ronald Pohl about the electronic lexicon-project) Ronald Pohl, "Des Dichters Flußfahrt - eine Reise mit der Maus", at: `http://www.ping.at/users/essl/bibliogr/elex.html` (4.8.1996), no page numbers.

format capable of expressing his worldview, that can accommodate the collection of the "moments of enlightenment" (Erleuchtungszuständen), that, rather than a coherent temporal and logical development, define the individual's consciousness for him. He is also not trying to write a Joycean stream-of-consciousness novel:

> Ist der Tag, der meine sentimentale Reise einschließt, ein Abklatsch des Bloom-Tages? Nein. Meine Sekunden sind nicht die Sekunden des Denkkontinuums, sondern Blick- und Blindsekunden eines Weltmodell-Kontinuums. (p.132)

This "negative intertextuality" of describing what the text in <u>not</u> modelled on, is at other places complemented by a list of direct influences and an open defence against any accusations of plagiarism.

> [... S]olange nicht Kritiker das Alphabet nach einmaligem Gebrauch wegschmeißen, so lange beantande ich an keinem Schriftsteller die Verwendung der Sprach- und Baumöglichkeiten anderer. So lange bitte ich aber auch, mich mit dem Vorwurf des Plagiats zu verschonen, wenn ich kurze Sätze wie Klabund, lange wie Gütersloh, traurige wie Storm, lustige wie Arno Schmidt, Konglomerate wie die Expressionisten, Ellipsen wie George, Farben wie die Fauves, Farben wie Magritte, Farben wie Renoir und Schlagzeuge wie Orff einsetze. [...] Die Elster, die Menschen Glasscherben, Nähzeug und chirurgisches Kleinmaterial entlehnt, funktioniert es auch um, macht keine Glaserwerkstätte, Boutique und kein Transplantatorium draus, sondern eine ganz eigenständige Freudenstatt für sich und Gleichgesinnte. (59)[115]

The list of influences includes artists as well as composers, indicating that Okopenko regards the boundaries between artforms as fluid and also explaining why he initiated the multimedia electronic version of his novel which I will discuss later on.

Both novels are very interesting and very playful examples of how a complex subject can be split up into bits of information and then referenced, and where it is again up to the reader to find his/her own way through the text. The least intuitive way to read these novels is to read them from A-Z, from front to back - they invite experiments, they demand to be read in alternative ways, against the usual conventions of print.

We never reach the exporters' meeting in Druden, and we never find out enough about the Khazars to get a complete picture of their culture, we never reach "the end". Both texts raise important questions about narrative closure. In texts like Okopenko's *Lexikon* or Pavic's *Dictionary,* where reading is a jumping between text-fragments, how do I know

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[115] This extends to an invitation to take up the encyclopaedia format and expand it: "Ich bestätige hiermit, daß ich die Verfasser weiterer Lexikonromane nicht als Nachahmer betrachten werde" (p.157)

that I have read everything, that I have finished the book? How do I achieve a "sense of an ending", a sense of closure?

2.4.3: Closure

When Aristotle famously defined the literary text as an artistic whole "that which has a beginning, a middle and an end", he had in mind not only the (inevitable) physical end of any text, but a feeling of satisfactory ending, of closure, that a successfully structured narrative should achieve. A number of studies[116] have tried to examine this behaviour further and have tried to establish how a sense of closure is achieved in the reading process in classic texts and, more complicatedly, in modern texts that often consciously work against closure.

Frank Kermode's basic proposition is that any reading is driven by a desire to make sense and to find patterns in any text that can also be found in other concepts such as religion, philosophy or science. Barbara Herrnstein Smith suggests that a certain satisfaction marks the point where narratives conclude (as opposed to just stop) and where the reader reaches a point where s/he can perceive all narrative elements as related to each other and can establish a unity of structure that is "confirmation of expectations" and which is "usually distinctly gratifying" (p.2). Marianna Targovnick studies a number of traditional novels and argues that closure is not only defined by the unity of beginning, middle and end or the resolving of all plot elements, but sees as necessary an "honesty and appropriateness of the endings' relationship to beginning and middle". They all agree that we read in expectation of sense, look for solutions to questions and ambiguities narratives might pose - which we tolerate because we, as Douglas puts it "anticipate that everything we meet in the course of reading that narrative will make sense once we hit the ending"[117].

This anticipation of a satisfactory ending, however, reflects a traditional notion of

[116] The three mentioned here are: Frank Kermode, *The Sense of an Ending: Studies in the Theory of Fiction* (New York: Oxford University Press, 1967); Barbara Herrnstein Smith, *Poetic Closure: A Study of How Poems End* (Chicago and London: University of Chicago Press, 1968) and Marianna Torgovnick, *Closure in the Novel* (Princeton, NJ: Princeton University Press: 1981).

[117]Jane Yellowlees Douglas, "Where the Senses Become a Stage and Reading Is Direction: Performing the Texts of Virtual Reality and Interactive Fiction", *The Drama Review*, vol.37, no.4 (Winter 1993) 18-37 (p.31).

narrative construction, and is not so easily applicable to much 20th century modernist and postmodernist writing that consciously sets out to undermine the closing moment of narrative development (if not narrative development, causal and temporal, altogether) and plays against the expectations of narrative closure of the inevitable physical ending of any (print) text. While Targovnick mentions these challenges only in passing "because they do not lend themselves to detailed analysis" (p.13) and are in her opinion often merely "gimmicky" (p.205), Kermode and Smith take what constitutes an important tendency in the writing of this century more seriously and term them "open" and "anti-closural" respectively. Various strategies of stopping without concluding can be identified: Joyce's *Finnegan's Wake* is an example of a circular arrangement, where the last sentence is also the first and the novel can start all over again, Thomas Pynchon's *The Crying of Lot 49* creates a detective-story-style suspense only not to resolve it at all, but offers four different options of what the end could be, John Fowles famously adds a second alternative ending in *The French Lieutenant's Woman* after a satisfactory sense of closure has already been achieved once.

> And so we have a novel in which the reader will find none of the gratification to be had from sham temporality, sham causality, falsely certain description, clear story [...]. The reader is not offered easy satisfaction,but a challenge to creative co-operation.[118]

What Frank Kermode says here about Robbe-Grillet and the nouveau roman can be applied just as easily to many forms of the modern novel, in which readers are not conveniently supplied with conclusions and solutions, but left with gaps and contradictions in the construction of the text, which they are invited to bridge and fill.

The one aspect readers can usually be sure of is that of physical stability and of a physical ending of any book. Kermode continues: "We cannot, of course, be denied an end; it is one of the great charms of books that they have an end." This physical endpoint is the vantage point from which the reader can assess all the information previously given, where readers know that they have now read all the available material and - even though this does not necessarily imply the solution of the narrative - the reader can at least be sure that there will not be any more information and that they can begin to make sense of the text as a whole.

[118] John Fowles, *The French Lieutenant's Woman* (London: Jonathan Cape, 1969), p.19.

If the charm of a book is that it inevitably reaches an end-point, the charm of a hypertext (and I include print encyclopaedias and encyclopaedia novels in this category) is that they do not have this distinct physical end-point. They are of course not infinite, but because of their set-up of links / references that continuously refer to other related nodes / entries the reading could in many cases go on indefinitely. Readers can never be sure if they have read everything, and even more, that another reading of the same fragments in a different order would not cast a different light on the events. The text denies closure; it is the readers' task to create the "sense of closure" for themselves. They read on until they have achieved an idea of the structure of the text and the potential narratives that could be constructed in it (without ever realising more than a few). They might read until they solved the questions they had when approaching the hypertext in a satisfactory manner, or until in a fictional hypertext one version of the events seems more convincing than others. Or they start again at some point and try (in the light of their first reading) to support their interpretation, or alter it. Or they might give up. Closure is not part of the structure of the text, it is part of the reading process. And in an electronic text, without any physical indication of the size of its network and the lack of orientation points (page numbers, bookmarks - any indication of the position of the reader in the text), this feeling of closure constructed by the reader in the process becomes even more apparent.

The Electronic Lexicon Novel (ELEX)

The electronic Lexikon-Roman took a number of years to come into fruition, with artists leaving and joining the group that under the name "Libraries of the mind" has set themselves the task of expanding Okopenko's text multimedially. Presented to the public on the "Softmoderne" Conference in Berlin in September 1997, it combines Okopenko's text with images and music and, most importantly, implements the 'virtual' hypertext links of the printed encyclopedia novel as real click-on hypertext links.

"Der Lexikon-Roman ist nach wie vor eine enzyklopädische Sammlung, die Querverweise werden aber dank des Computers erst richtig nutzbar" argues Franz Nahrada, one of the initiators of the project, who in this quote shows his belief that the

encyclopedia format of the printed text can be more directly and literally - and consequently more successfully - realised in the electronic format.

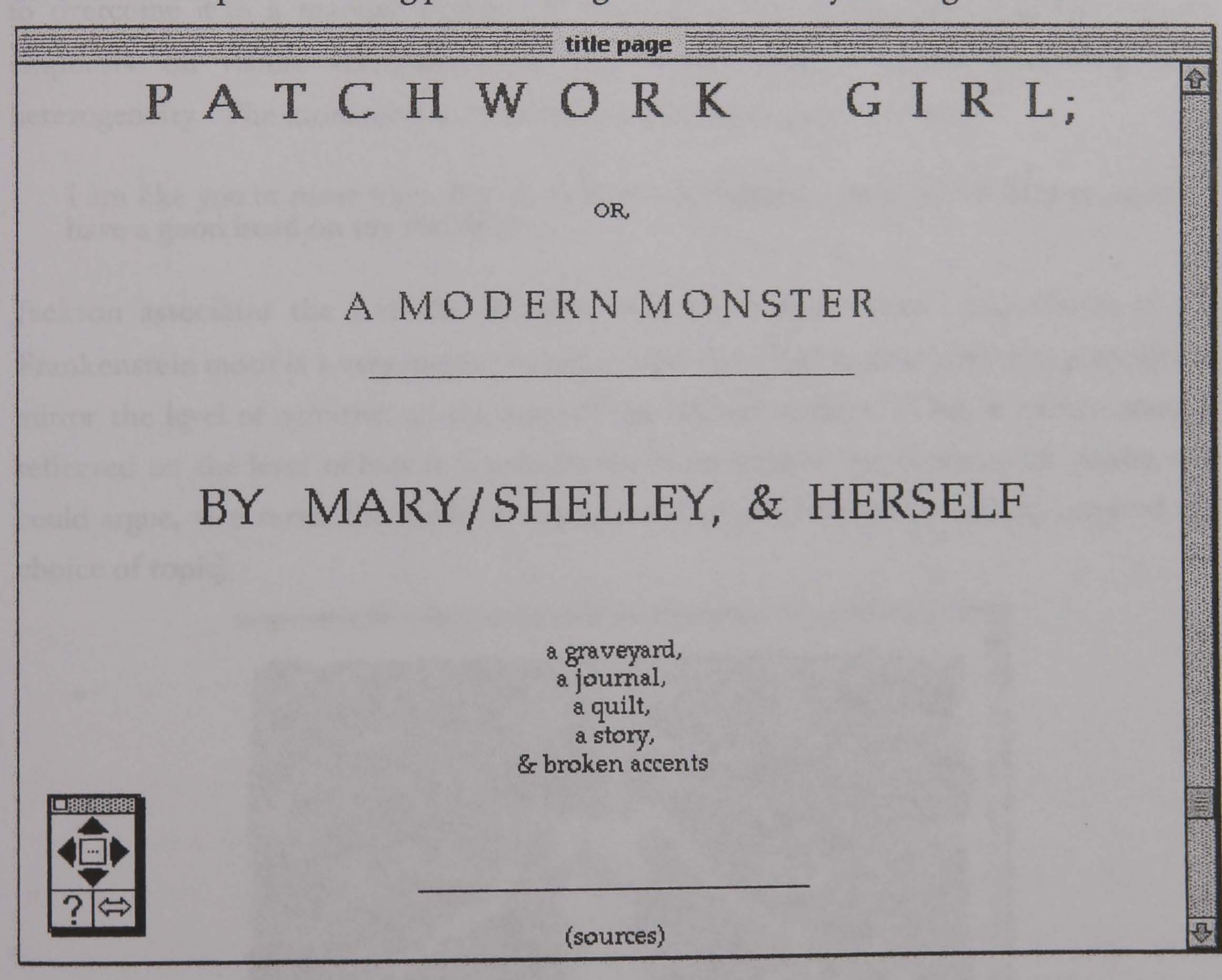
He continues his argument by stating that "Im Roman findet sich die visuelle Protokollierung eines wasserbeschlagenen Glases, das natürlich für jeden anders aussieht. Statt dieses "einzukleben", wie der Autor des Romans ironisch vorschlägt, mache ich es nun tatsächlich sichtbar" The glass, in Okopenko's text and comment a symbol for the indeterminacy of the written word and its openness for reader's interpretation, is reduced here to an object, whose direct visual representation replaces the mediated text.

It is, however, this literal interpretation of concepts picked up by Okopenko in his work (in his Lexicon-Roman the question of linearity vs non-linearity as well as the "building block" nature of most fictional texts) that I want to take issue with and argue instead that it is on the conceptual level, because and not despite the impossibility of implementing them in print, that Okopenko's strategies are such powerful explorations of the construction of the literary text and the expectations and strategies of readers.

All textual collages that choose an organising principle other than narrative logic and development (and I have chosen encyclopaedia novels as perhaps the most radical of all possible examples), have in common that they try to replace a very powerful linear construction, that is encouraged by the inevitably very one-dimensional linearity of language and writing and reading, with a more spatial, and I would argue hypertextual, construction that introduces a greater element of choice but also of multiple relations between text elements. In an electronic hypertext this can be exploited even further, though always running the risk of confusion and of losing some of the immediate friction of print texts that work with great success against familiar conventions and against the restriction of their medium.

2.4.4: Patchwork Girl: Hypertextual Collage and Intertextuality

The idea of textual collage is very closely linked with concepts of intertextuality, a theme explored consciously in another work of electronic fiction: *Patchwork Girl*[119]. *Patchwork Girl* is a work of hypertext fiction by Shelley Jackson - or, as the title page tells us by Mary /Shelley and Herself - her being the monster. It is a remake of the Frankenstein tale based around certain "what ifs". What if the monster had been female? What if Mary and not Frankenstein had created the monster? What if the monster and Mary had fallen in love? What if the monster had left for America? It is a tale about love, creation, monstrosity, the (female) body and scars - informed by feminist but also postmodern ideas. As can be seen from the title page, the story is made up of different parts all accessible as separate starting points through the narrative by clicking on them.



Two recurring motifs of the text are worth focusing on to examine further the notions of collage and intertextuality in this electronic hypertext, namely that of scars and that of the quilt and I will use them as starting points to explore wider questions of narrative and

[119] Shelley Jackson, *Patchwork Girl* Hypertext on diskette (Watertown, MA: Eastgate, 1995).

especially of intertextuality, which are both directly raised by the text.

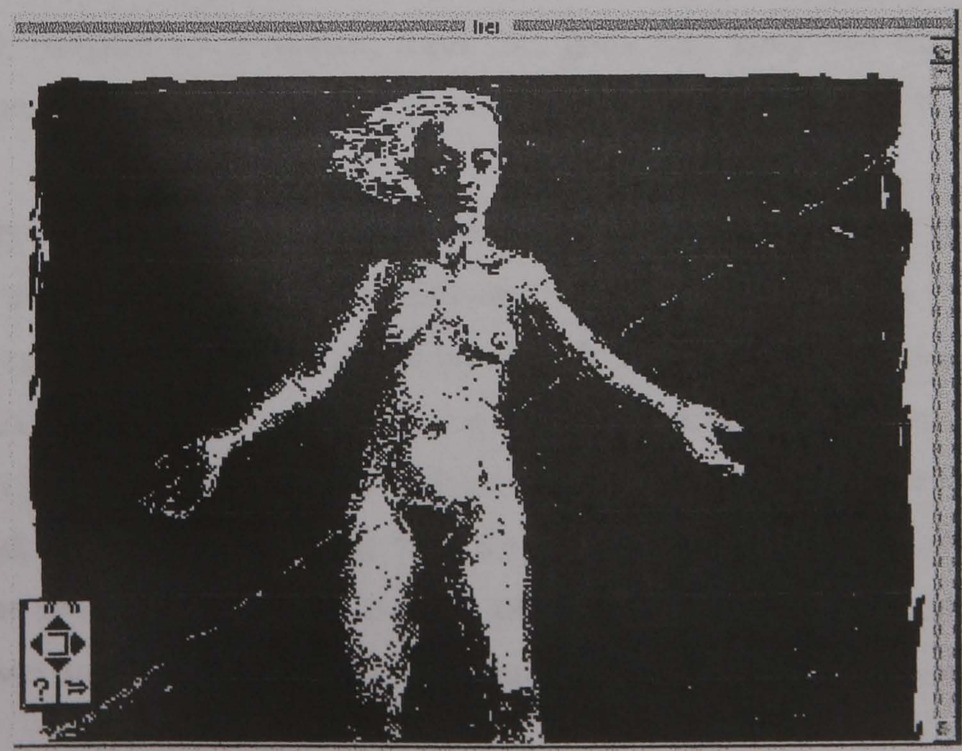
In her descriptions of herself, the monster frequently refers to her "patchwork nature", to her scars and the importance these have for her own sense of identity. In a node entitled "dispersed" she writes.

> My real skeleton is made of scars: a web that traverses me in three-dimensions. What holds me together is what marks my dispersal. I am most myself in the gaps between my parts, though if they sailed away in all directions in a grisly regatta there would be no thing left here in my place. (dispersed)

The metaphor of the scar is intriguing and interesting, because it is based on the very prominent but also very pessimistic contemporary notion of fragmentation, but also a way to overcome it in a manner that is not smoothing over or amalgamating, but puts an emphasis on visible disruption but also visible links, of unity coexisting with heterogeneity. The monster is a creature of mixed metaphors. She says

> I am like you in most ways. My introductory paragraph comes at the beginning and I have a good head on my shoulders.

Jackson associates the I of the monster with the I of the text. The choice of the Frankenstein motif is a very inspired choice, because it offers an excellent opportunity to mirror the level of narrative on the level of the textual medium. What is written about is reflected on the level of how it is written, the form reflects the contents (or maybe, one could argue, vice versa, the medium hypertext in which Jackson is working inspired the choice of topic).



Just as her scars define the identity of the monster, its links are what define the hypertext, they are the visible gaps, they are for Shelley Jackson the scars of the text, moments of hesitation about which readers stumble, but also bridges across to otherwise separated parts. They are the moments of interaction, in which readers step out of the smooth illusion of the perfect narrative, or the perfect body, and notice its construction and imperfections.

But, and here is where the parallel between Patchwork Girl the monster and Patchwork Girl the text stops functioning and the text undermines its own theory, unlike the complete monster's body or the quilt with which Jackson compares the text or the collage, the hypertext can not be taken in as "a complete whole" from an outside/distance perspective - it is not possible to step out of the hypertext, it is only ever accessible from within its parts.

> Assembling these patched words in an electronic space, I feel half-blind, as if the entire text is within reach, but because of some myopic condition I am only familiar with from dreams, I can see only that part most immediately before me, and have no sense of how that part relates to the rest. When I open a book I know where I am, which is restful [...] But where am I now? I am in a here and a present moment that has no history and no expectations for the future.(this writing)

This point is one of the most problematic aspects of hypertext fiction, the inability to step so-to-say outside the text and get a sense of a macrostructure in relation to which readers can place and understand its individual parts and get a more complete sense of a "body of text". Jackson talks about scars and parallels them with the links of the hypertext. The links, however, do not really achieve this bringing together of different parts. They are, despite their names, more like gaps that keep the distance open. This text is more a heap of discrete patches than a complete patchwork quilt.

The second keyword which needs to be examined here is that of the quilt, which is the term Jackson herself uses to describe her text, she also says that she "weaves together" different aspects. Use of such terminology puts her into a feminist tradition a) because both quilting and weaving are generally seen as more feminine arts and crafts (I find it interesting that she does not chose collage, which has a closer connection to a male-avant-garde tradition) and b) because they are both used in feminist discourse to assign certain feminine qualities to certain aspects of computer technologies (such as computer networks)[120] Two aspects of quilts are important here: They are collaborative efforts, they

[120] See for example her the work of Sadie Plant, e.g. *Zeroes and Ones* (London: Routledge, 1996).

have not one creator but many with equal input, and they are made up of recycled scraps of already existing material. Both aspects lead us straight to one aspect of literary theory very prominent in ***Patchwork Girl***: that of Intertextuality.

Jackson acknowledges the intertextual qualities of her work on more than one level right from the beginning. She makes the connection to Mary Shelley and a whole tradition of Frankenstein re-works, but also to Frank L.Baum's *Patchwork Girl in the Land of Oz* which are evident on the cover page. She lists all her sources scrupulously (in "sources" - literary, philosophical and scientific titles) and especially the quilt part is an intertextual collage/quilt to the extreme as it is made up solely of snippets of other works put together into a new context. She uses the available technology with ingenuity, by presenting the text first in a unified typeface and only on the second click indicates and identifies the sources through a change in typeface.

What Jackson does by meticulously referencing of all her sources show, however, a limited and very literal understanding of Intertextuality. Understood in a much wider sense (as meant by Kristeva) it is not about identifying one's sources to prevent being accused of plagiarism, not about by identifying the borrowed parts and thereby establishing the rest as one's own work and as genuine and original, and not about confirming authority and copyright. Intertextuality is about undermining these notions, it wants to describe the inevitable saturation of any writing and reading with strata of other texts and refute ideas of originality rather than confirm it. And it is here, in its round-the-corner confirmation of authority and originality, where current hypertext experiments, under the striking surface of newness and innovation of the medium, can in fact be read as deeply conservative.

The tension between the newness of the medium and the rather "conservative / old-fashioned" values that one can find on closer inspection, the discrepancy between the theoretical claims (of intertextuality, reader-interactivity etc) and their limited implementation in practice, is a very interesting, but also not widely acknowledged aspect of current hypertext fiction.

2.4.5: Collage without an organising principle: Randomness

The box-novels of B.S.Johnson and Marc Saporta[121], which instead of being bound into one order, come in loose-leaf sections to be shuffled by the reader into a reading order, the surrealists' automatic writing, and also Tzara's and later Burroughs' cut-up techniques[122] and other explorations of chance-procedures are a move towards an introduction of randomness or chance[123] in the selection of literary material and towards a radical rethinking of definitions of what constitutes a work of literature (or art or music, since the same trend can be observed in other artforms), which no longer implies an act on conscious design through the role of the author. Or rather, the self-abolition of the author, who is no longer perceived as a genius-creator of an original and meaningful work, but rather as a collector, whose role it is to gather external elements that in their randomness give readers the opportunity to discover or invent sense and meaning in their juxtaposition.

In hypertext, however, the notion of a random juxtaposition is problematic. Links, which are an integral part of text, raise the expectation of coherence and connectivity and contradict the possibility of pure randomness. Hypertext, though it denies, with its emphasis on intertextuality, the possibly of creating an entirely new work, nevertheless cannot deny the existence of an author to create the network and the links in it. It does, however, shift the definition of the author's task to not only that of collector, but that of arranger and organiser.

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[121] Saporta's text, *Composition No. 1* (Paris: Éditions du Seuil, 1962) has not been available through inter-library loan, but has been discussed in Sharon Spencer's *Space, Time and Structure* (p.209) and is mentioned in Bolter, *Writing Space* (pp.140-142).

[122] In 1916 Tristan Tzara proposed the following method for producing dada-poems:

> To make a Dadaist poem / Take a newspaper. / Take a pair of scissors. / Choose an article as long as you are planning to make a poem. / Cut out the article. / Then cut out the words that make up this article and put them in a bag. / Shake it gently. / Then take out the scraps one after the other in the order in which they left the bag. / Copy conscientiously. /The poem will be like you. / And here you are a writer, infinitely original and endowed with a sensibility that is charming through the understanding of the vulgar." (Robert Motherwell, *The Dada Painters and Poets: An Anthology,* (New York: George Wittenborn, 1951), p.164.

This was later taken up by William S. Burroughs who writes in "The Cut Up Method of Brion Gysin:

> The Method is simple: Take a page or more or less of your own writing or from any writer living or dead. Any written or spoken words. Cut into sections with scissors or switch blade or preferred and rearrange the sections looking away. Now write out the results. (quoted in Hassan: *The Postmodern Turn,* p.11.).

[123] For an in-depth discussion of chance in literature and other arts, see: George Brecht, "Chance-Imagery", in: *The Discontinuous Universe: Selected Writings in Contemporary Consciousness,* ed.by Sallie Sears and Georgianna W. Lord (New York and London: Basic Books, 1972), pp.76-96; as well as Christopher Butler's chapter on chance in avant-garde art, music and writing in *After the Wake: An Essay on the Contemporary Avant-Garde* (Oxford: Clarendon Press, 1980), pp.102-108.

This shift, not a "death of the author", but rather a rebirth of the author as organising agent has been proposed by Mark Amerika, author and main initiator of the *Alternative X* internet site, one of the most varied and interesting literary sites on the WWW and the voice of the Avant-Pop movement, that, while firmly rooted in both (postmodern) **avant**-garde writing and **pop**-culture, wholeheartedly welcomes and experiments with hypertext writing.

> One of the main tenets of postmodernism is: I, whoever that is, will put together [...] bits of data and form a Text, while you, whoever that is, will produce your own meaning based on what you bring to the Text. One of the main tenets of Avant-Pop writing is: I, whoever that is, am always interacting with data created by the Collective You, whoever that is, and by interacting with and supplementing the Collective You, will find meaning. In a Data Age where we all risk suffering from Information Sickness, one cure is a highly potent, creatively filtered tonic of (yes) textual (or multi-media) residue spilled from the depths of our spiritual unconscious. Creating a work of art will depend more and more on the ability of the artist *to select, organize and present the bits of raw data* he or she has at her or his disposal. We all know originality is dead and that our contaminated virtual realities are always already readymade and ready for consumption! (my italics)[124]

Electronic texts based on random principles and with the intention to make authors redundant for the creation of literature, therefore tend not to be hypertexts and also to rely on the computer not only to define the reading order of given text elements, but go in fact further and let the computer select these text elements. Programs like the "random postmodern thesis generator" or the HyperCard Stack DADA-POET use random material out of any chosen text to create their texts. A poem created with the latter program based on the text of the first chapter of this thesis reads:

```
"the"

a dominant that single absence
modernity their for has build

stripWd texts century changed a stripWd
distinguishing a
contrasted concept consult the

a move different to
and author
forms become in grasp of
```

[124] Mark Amerika, "The Avant-Pop Manifesto (Remix)", in *In Memoriam of Postmodernism* , at: http://www.altx.com/memoriam/pomo.html

```
a doubt them to stripWd book
of not revision title
as medium therefore as a on
supermarket Literature simplification distributor medium

© 31/7/97 by DadaPoet
```

The program Dada-Poet, is of course, named after the Dada Movement at the beginning of the century and refers back to Tristan Tzara's techniques described above. The methods proposed by both Tzara and later Burroughs are, however, not methods primarily suggested to create literary artifacts, but are intended to shock, to make a statement about literature. This is anti-literature in that it challenges assumptions about literary genius and the construction of meaning, which, as with any art so firmly rooted in a polemical meta-framework loses its strength if repeated too often.

Computer-generated random texts cannot claim to be an original idea and while the results are at times entertaining, they are merely a not very influential and far-reaching sideline of electronic writing and of more serious attempts at computer-generated literature (See chapter 5).

2.5: Conclusion

Christopher Butler argues that a defining feature of the 20th century (literary) avant-gardes is that their experiments are to be read in a theoretical framework and that critical concerns "not only motivate artists, but are integral to their work". This, together with the fact that in a mass-media society the 'avant-garde' gets absorbed into the mainstream much faster, explains why they are short lived and "exhaust"[125] after initial points are made. Which is what OuLiPo-members recognised when they did not feel the need to ever find more than a few examples of any of the structures they developed, and is why almost all of the print-experiments discussed here are single incidents in the work of the authors, developed for one particular work. Despite their differences and their

[125]A term used by John Barth in his well-known essay "The Literature of Exhaustion" (*The Atlantic Monthly*, vol.220, no.2 (1967), pp.29-34; but also in a very similar argument by Roland Barthes who critises "those productions of contemporary art which exhaust their necessity as soon as they have been seen (since to see them is immediately to understand to what destructive purpose they are exhibited: they no longer contain any contemplative or delectative duration). " (*The Pleasure of the Text* (London: Jonathan Cape, 1976), p.18).

uniqueness, they all have in common the underlying discussion of different aspects (multiplicity, simultaneity, choice, and organised as well as random collage) of what can be summarised as non-linearity, which raises the question of the value of a repeated exploration of issues such as non-linearity in hypertext.

While hypertext is arguably better suited to represent a non-linear arrangement of text elements, I have to disagree with hypertext theorists who conclude that the new medium therefore devalues previous print experiments for two reasons. Firstly, I believe that it is a fallacy to conclude that hypertext can automatically generate meta-statements about the conventions of literature similar to those print texts can make. The second fallacy in discussion of proto-hypertexts is to assume that they want to solve the problems that they discuss on a meta-textual level rather than using the inherent contradiction between the surface and the deep structure of the narrative.

Language experiments function only in opposition to conventions; it is because they are firmly rooted in a print tradition that they can defamiliarise them. This therefore both forces and allows them to express theoretically what hypertext wants to realise. A text like Robert Coover's "Babysitter"[126], with half a dozen mutually exclusive versions of a Babysitter's evening that are presented in an arrangement that is inevitably linear but in effect parallel, is often quoted as one of the print proto-hypertexts that is "straining at the typographical leash"[127] and that might benefit from conversion into a hypertext. But would it? For me it is a text that works well because it is in print, not even though. Readers can recognise their confusion and the contradictions in the text as a deliberate technique used by the author to make complex comments on narrative reality and temporal simultaneity and exclusiveness of fictional events, rather than an accidental lack of coherence. The implied statements about the instability of logical and temporal relations in fiction and our assumptions about them, is supported (and not contradicted)

[126] Robert Coover, "The Babysitter", in: *Pricksongs and Descants* (London: Picador, 1973) pp. 165 - 193.

[127] Jane Y. Douglas and Gordon Howell, "The Evolution of Interactive Fiction", *Computer Assisted Language Learning: An International Journal*, vol. 2 (1990), 93-109 (p.96).

by the stability and fixed order of the print text.[128]

While Borges, Johnson, Cortazar and others that could be added to the list play consciously with the familiar conventions of print and try to undermine the notion of the linear and solid print medium but at the same time operate within it, hypertext does not only want to work against print but move beyond it. This, however, also means moving beyond the structures and conventions against which print experiments work - and therefore there is danger of loosing the challenging and defamiliarising power of earlier print texts.

Non-linearity is not the most important and most innovative aspect of hypertext fiction. Aspects of non-linearity have already been explored in print, and hypertext can pick up and continue these explorations in a new medium. But in doing so it cannot work against the old conventions and against familiar framework, but has to establish new conventions for this new literary writing medium.

Whether these are to be accepted will depend on whether a need for them can be identified. This need could either come out of a narrative necessity (the narrative material requires a format other than can be realised in print) or could be triggered by the reader's need for new formats and possibly more interactivity.[129]

Using the computer to compose and present literary texts as electronic hypertext is, as Stuart Moulthrop himself has pointed out, NOT about narratology and does in most cases not introduce radically new strategies of fictional writing:

> The issue [...] is not whether people will tell stories in a non-traditional way: metafiction, surfiction, OuLiPo and the New Novel all covered that ground long ago. I don't think interactivists have done much that wasn't anticipated by *Mumbo Jumbo*,

[128] A similar argument applies to Queneau's work, and especially the *Cent Mille Milliards de Poèmes*, about which William Paulson said in his 1989 that "obviously the possibilities of the book as format are being strained to the limit, and *Cent Mille Milliards de Poèmes* would be an ideal candidate for a computerized edition." (William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History*, v.20 n.2 (Winter 1989), 291-304 (297). I do agree, however, with Espen J. Aarseth, who argues that "the fact that it *is* a book is just as significant; and if it seems easy to implements as a computer program, that is because of the simple and unstrained elegance of its idea." (Espen J. Aarseth, "Non-Linearity and Literary Theory", in: *Hyper/Text/Theory* , ed.by George P. Landow (Baltimore, MA: Johns Hopkins University Press, 1994), pp.51-86 (p.67).

[129] see: Heiko Idensen, "Hypertext als Utopie: Entwürfe Postmoderner Schreibweisen und Kulturtechniken", at: `http://www.uni-kassel.de/interfiction/projekte/pp./poesie.htm` (31.12.1996), who argues a similar point.

> *Gravity's Rainbow*, or *The Public Burning*, to say nothing of *Labyrinths* or *Un Coup de Dés*.[130]

The issue, he argues, is that the medium can challenge and shift the roles of and the relationship between writers, publishers and readers and can involve the reader in various ways in the construction of the text. The textual authority of a linear constructed argument or narrative is undermined by electronic text, and while non-linearity in itself does not constitute the innovation it is at times made out to be, the way these structures can be used to open up the text to reader's participation is worth exploring.

> One of the key feature of the hypertext idea, a logical consequence of its "non-linearity" is the new role and enhanced responsibility it places on the reader. [...] A text may be designed in such a way that it has innumerable orders, but each reading has its temporal order, and the hypertext which can be read in a multiplicity of ways calls for commitment from the reader who has to devise an appropriate method of reading, or a productive path of exploration.

Hypertext has therefore been described as "interactive" by both distributors and critics - a claim I want to look at more closely in the next chapter.

[130] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self'", The New York Review of Science Fiction, 66 (February 1994) pp. 1, 8-11 (p.11).

Chapter 3: A New Kind of Reader? Interactivity

> *The traditional definitions of hypertext begin with nonlinearity, which, however, is not a good place to start. [...] My own amended definition of hypertext [...] turned the metaphor to drama while unfortunately adding an element of the metaphysical: "hypertext is reading and writing in an order you choose where your choices change the nature of what you read". (Michael Joyce)*[1]

Non-linearity cannot function in itself as a defining characteristic of the electronic text, as Stuart Moulthrop, Michael Joyce and also Martin Rieser[2] have rightly pointed out. This, and the related issues of simultaneity, multiple viewpoints and the (random or organised) mosaic narratives discussed in the previous chapter, are features present in texts both in electronic and in print format, independent from the medium. While in print, however, a (physical) non-linear arrangement is a very deliberate technique working against familiar conventions and to some extent the nature of the print medium as well as that of the narrative structure, non-linearity is a more inherent part of the hypertext structure, and hope has been expressed that it would facilitate what is generally referred to as interactivity - a greater reader engagement with the text. At first glance this seems ironic, since it seems that texts that deliberately work against established norms (i.e. the print experiments mentioned in the previous and coming chapters) possess a greater degree of surface opacity and require a more conscious reader engagement than texts in a medium where a structure achieved only with intellectual effort in print, becomes the favoured, more "natural", and consequently more transparent format. Arguments in favour of a greater interactivity potential of electronic text do not deny this, but counter-argue in a number of ways briefly outlined here and discussed further on in this chapter: firstly, the medium itself is still an unfamiliar one, though not for business

[1] Michael Joyce, "Nonce Upon Some Times: Rereading Hypertext Fiction", *Modern Fiction Studies*, vol.43, no.3 (Fall 1997), 579-597, p.580.

[2] Martin Rieser argues that a simple distinction between linear print and non-linear hypertext is, while widely perpetuated, "simply untrue[...]. There is no clear junction between linear and non-linear forms of narrative." in: "Interactive Narratives: A Form of Fiction", *Convergence*, vol.3, no.1 (Spring 1997), p.10-19 (p.10).

and entertainment use but as a site of cultural and especially literary production, and any form of electronic literature challenges readers' habitual processes simply by being in electronic form. Most readers will come to a text with a set of expectations and conventions acquired in contact with the printed word, and while these in print-experiments are challenged directly from within the medium, hypertext literature challenges them indirectly by forcing readers to develop a new set of conventions for the new medium. Secondly, the medium is in itself very flexible and allows readers to alter (comment on, add to, annotate or delete) the text in a manner that is in appearance and in status indistinguishable from the 'original', thereby not so much reversing, but undermining the author - reader hierarchy present in print. Furthermore more flexible distributions systems (digital text can be copied with great ease and a computer network like the internet makes worldwide distribution possible) mean that these altered texts can be made available to a wide audience. And lastly, and most importantly, it has been argued that hypertext, even if not physically altered by the reader, invites a greater degree of active participation through its network structure; it is perceived to offer a greater element of choice, and structures that allow readers to have a more direct influence on the construction of text and narrative.

The promise of interactivity is one of the most frequently discussed and possibly most important features of electronic writing. It is, however, not a term exclusive to hypertext theory, but is used both in sociology and in computer technology (albeit with slightly different meanings) and has lately become a common word in a great number of contexts where the real or perceived influence of audiences / reading publics / consumers on certain activities or products needs to be stressed. After a look at why, especially in advertising, it has become such a ubiquitous, though often rather undefined word, I will look at more specific contexts of interactive literature and attempts to define both terms and its consequences on forms of literature.

3.1: The Temptation of Interactivity

The word "interactive" has been employed to promote a wide range of products. Exploiting the apparently existing desire in our society not just to passively consume but to be creative, the promise of interactivity is applied to everything from "create your own

pizza" menus and "personalised" gifts ("Your name embroidered on a baseball cap") to "interactive" museum displays ("Press this button and listen to a tape/watch a video") and, last but not least, "interactive" shopping, as for example seen in the Sunday paper, the "*Observer Interactive*" - a telephone-number to dial and order the books and records reviewed. But how interactive is this? Does not to interact with a product mean to have a genuine influence on its design and the production process and not just to press a button or to be allowed to decide on some minor, cosmetic features like colour of a product?

One of the major changes from modernity to postmodernity has been the developments in production technology, resulting in a shift from mass-produced uniformity to customised individuality. In what has been referred to as post-industrial society, economy of scale is becoming increasingly less important and small production runs or even one-offs have become a possibility, offering a viable alternative to mass-production and offering consumers the opportunity to now play a more active role in determining what is produced. The role of advertising has changed accordingly, its task is no longer to create a desire to have a particular product, but to have one that is different from everybody else's.

I would argue that this is the reason, together with a saturation of markets that need new labels to keep up demand, why 'interactive' has become such a buzz-word. If interactivity is to be a meaningful term, and as a preliminary definition I would want it to mean "to be actively participating in the design and the creation of a product", one has to be more careful and accurate with its use. How great is the influence a consumer can have on a product? With most consumer goods there exists not really much space for consumers to truly interact other than on a relatively superficial level of being able to choose from a wider range of colour or appearances in a more convenient way. After all, the production costs are far too high, the knowledge and the technology required far too complex to produce them oneself or have any real influence on the design. A producer has to be relied on, and a very limited influence on the end-product is all the consumer can expect.

3.1.1: Interactive Art

With the end of mass-production, we may also see the end of mass-culture, and a more individual, eclectic cultural life together with technological developments results in an interest in developments such as video-on-demand or interactive television (in broadcast media) as well as creative multimedia computer applications (in the arts).

It appears that the claim for interactivity becomes most viable in the arts. New technologies allow more widespread and inexpensive access to both production equipment and distribution channels. The former is important for areas like film and video, where professional camera and editing facilities are now available for the amateur user; the latter applies more to the visual arts and literature, art forms that have never required expensive technology to be produced but are expensive to reproduce and make public and distribute.

Different art forms can be interactive in different ways. Music (performed live) and drama have always been regarded as more interactive art forms than cinema and literature. They have an aura of immediacy, they are performed in the present, in front of an audience whose reaction influences the presentation of the material and vice versa. Film, the visual arts and literature are more problematic: they represent a creative process that has happened in the past and which the audience cannot influence anymore. A film has been made, a book has been written - the events have happened already, either in the mind of the narrator or in reality, and are now being re-told to us. There does not seem to be any room for interactivity.

3.1.2: Interactive Literature

> There is a conflict between interactivity and storytelling. [...]. Most people imagine that there's a spectrum between conventional written stories on one side and total interactivity on the other. But I believe that what you really have are two safe havens separated by a pit of hell that can absorb endless amounts of time, skill and resources. (Walt Freitag)[3]

Interactive Literature is one of the most problematic interactive art forms. Interactivity and literary structure somehow seem to contradict each other: the tension that exists

[3] Walt Freitag, developer of interactive computer games, quoted in: Charles Platt, "Interactive Entertainment: Who writes it? Who Reads it? Who Need it?", *Wired*, vol.3, no.9 (September 1995), 145-149, 195-197 (p.195).

between a tightly structured, well written story with plot development, twists and revelations and that consequently does not allow for much reader interaction on one hand and openness and flexibility of narrative and structure required by interactive texts should not be underestimated. At the heart on any discussion about interactive literature lies the question of whether and how this tension can be reconciled. A number of theorists have taken up this question[4] and have come to the conclusion that it is very difficult, if not impossible, to combine the two elements without risking loss of effectiveness of the one when over-emphasising the other.

Another problematic element in the implementation of interactive literature is that the author of a work of fiction is still very much considered to be an original creator who puts meaning and a certain intention into a text and therefore has an authority over it- and consequently the reader's role is seen in re-constructing rather than constructing text and textual meaning. Changing the goal posts and aiming at writing with a higher degree of reader influence means that we have to reconsider the role of the author, textual authority and the function of literature.

Reconsidering the forms of and assumptions behind literature is not a phenomenon that is only triggered by the advent of a new writing technology. Literature and literary forms and ideas about what literature can and should do are not fixed and stable entities; on the contrary, they have to be seen in an historical, cultural and socio-historical context and develop with them. Older forms and older attitudes survive for a long time or are adapted to the change; it is a process of evolution rather than radical displacement. Raymond Williams[5] speaks of emergent and residual cultures that always exist parallel to the dominant culture - as new technologies become available and attitudes to literacy change and other artforms develop, literary forms come under scrutiny and are reconsidered; old wine cannot be poured successfully into new bottles for long.

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[4] Jürgen Fauth, "Poles in Your Face: The Promises and Pitfalls of Hyperfiction", *Missisipi Review*, vol.1, no.6 (September 1995), (electronic journal) at: `http://sushi.st.usm/edu:80/~barthelm/06sept/06-jurge.html` (12.12.1995), Andy Cameron, "Dissimulation: Illusions of Interactivity". at: `http://www.wmin.ac.uk/media/VD/Dissimulations.html` (3/3/1996), printed in an altered version in *Mute*, (Spring 1995), p.10 , the above quoted Walt Freitag, and Marie-Laure Ryan. Marie-Laure Ryan, "Immersion vs. Interactivity: Virtual Reality and Literary Theory", *Postmodern Culture*, vol.5 no.1 (September 1994), (electronic journal) at: `http://jefferson.village.virginia.EDU/pmc/issue.994/ryan.994.html` (12/1/1996).

[5] Raymond Williams, *The Long Revolution* (London: Chatto and Windus, 1961) pp.41-71.

It is therefore not surprising that, with the great current interest in interactivity and media like hypertext systems becoming available, reader's participation has become one of the main foci of attention in the debate about electronic/hypertext fiction. But this debate is not only triggered by technological advances. Added to this has to be the focus on the reader in a large part of contemporary literary theory and practices of writing that aim at encouraging a more active reading, and it is in this wider context that attempts in electronic interactive fiction need to be placed. Electronic writing is not inherently interactive, just as it is not inherently non-linear, but it has offered new possibilities of exploration and implementation of an active reading process and of a continuation of experiments that have already taken place in print. Readers of print texts are far from passive (as contemporary literary theory is well aware of at least since the schools of reader-response criticism put the reader into the spotlight of critical attention - and writers in their practice for a lot longer), and to contrast the (passive) print text and the (interactive) hypertext only highlights again the oversimplifications still dominant in hypertext theory.

Despite its apparent suitability for reader engagement, the current forms of interactive fiction are rather disappointing. This gives rise to several questions as to whether the new forms are based too closely on familiar formats of the old and whether this is simply an inevitable stage any new medium goes through[6]. One might argue that the technology is simply not sophisticated enough (yet?) or, on the other hand, that hypertext fiction is an idea that fails to attract a greater audience for more than a short period of curiosity (the Wow-factor) because of some inherent problems. In the following I will look at possible definitions of interactive fiction and some print as well as electronic examples in an attempt to answer at least some of the questions and hopefully arrive at a workable definition of interactivity myself.

[6] Sarah Smith compares the early stages of film-making, in which the general paradigm (a term she borrows from Thomas Kuhn's *The Structure of Scientific Revolution*) was still that of theatre, to the early stages of electronic writing, that work within the paradigm of the printed book. She argues: "There is no general sense of what electronic fiction is, only that it exists. [...] Some early filmmakers, thinking film was like theatre, always filmed actors from head to toe and used painted scenery. Some early e-fiction systems have pages, formatted just like pages in a book, complete with paper clips and Post-It notes that can be attached to pages, corners that can be turned down, and so on. Silly, like painted scenery in film? Probably. But not unworthy of consideration; we learn from failure." (Smith, Sarah, "Electronic Fictions: The State of the Art", *New York Review of Science Fiction* , no.63 (November 1993), 1, 8-11 (p.1).

2.3: Definitions of Interactivity and of Interactive Literature

Interactivity is a term used in many contexts, which makes a simple definition not just difficult, but impossible. In the context of interactive literature / fiction three main metaphors can be identified, all three with their advantages and with the (inevitable) shortcomings of any attempts of defining metaphors. In the following they will be examined further by putting them into a context of literary theory and practice. They are:

a) interactivity as conversation

b) interactivity as performance

c) interactivity as exploration (related to games)

2.3.1: Interactivity as Conversation: Second Orality

In an interview with Stuart Brand, Andy Lippman, researcher at M.I.T's progressive Media Lab gives his working definition of interactivity as "mutual and simultaneous activity on the part of both participants, usually working toward some goal, but not necessarily"[7] . Unlike other, transmitting and therefore one-way, mass-media such as TV or radio, the greater flexibility of multimedia and its possibility to connect into reactive networks was welcomed as a step forward, because it can function as a two-way medium and allow feedback and two-way communication, which can be seen as an important condition for interactivity. Electronic writing can be, as McLuhan has termed it, a 'cool' medium, one that invites active participation.[8]

The characteristic differences between printed and digital text have already been outlined in chapter 2, and the metaphors of conversation (and drama) used in the context of interactive writing further confirm the proximity of electronic text not so much to written text or print but oral discourses, or rather, a proximity to both forms of cultural expression, a hybrid for which Walter Ong has coined the term "second orality". While he refers mostly to audio-visual mass-media, the "orality of telephones, radio and television, which depends on writing and on print"[9] , the term is equally appropriate to

[7]Stewart Brand, *The Media Lab: Inventing the Future at M.I.T.* (New York: Viking Penguin, 1987). p.46.

[8] He opposes cool to hot media, which are more passively consumed. John Slatin argues that hypertext is actually not 'cool' but "combines the heat and visual excitement of film, video, and television with text's cool invitation to participate".(John M. Slatin, "Reading Hypertext: Order and Coherence in a New Medium", *College English*, vol.52, no.8 (December 1990), 870 - 883 (p.876). I will discuss this combination of hot and cold, or immersion and distance later in this chapter.

[9] Walter Ong, *Orality and Literacy* (London and New York: Methuen,1982), p.3.

electronic text, which, while text-based, shows in certain characteristics closer similarities to the oral discourse of earlier, pre-literate cultures than to the relative stability and permanence of the written (printed) text.

Unlike the approach to define electronic hypertext through its non-linearity in opposition to the linearity of print, which is both reductionist and unhelpful for an understanding of digital writing and hypertext (literature), Ong's argument, based on the association of temporality/ linearity with the spoken word and of spatiality / 3-dimentionality with written / printed text (which in itself combines a linear reading process with a non-linear process of understanding, interpreting and sense-making), seems more promising. His term 'second orality' has been taken up in a number of discussions of electronic text. Mark Poster, for example, argues that the space-time coordinates of real-time dramatic action that define oral cultures, and the space-time coordinates of books or sheets of paper of written text merge in electronic text, which works on all those co-ordinates and on all planes simultaneously[10] .

While electronic writing is in certain ways a return to an earlier oral tradition, it is in many other respects also very different,[11] but I would nevertheless argue that a link to an oral culture of storytelling and the resulting perception and understanding of literature can help us appreciate the appeal as well as some of the problems and short-comings of interactive fiction.

In an oral narration, as Michael Heim observes, the listener has to engage more actively with what s/he hears, "to actively repeat the spoken word, since there is no place where it can be looked up"[12] . Text on the computer is stored in the computer's memory, but lacks the physical presence of written text and in a hypertext or an interactive fiction game discussed later it is almost impossible to ever recreate the exact same order of

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[10] Mark Poster, *The Mode of Information* (Chicago: University of Chicago Press, 1990), p.48.

[11]Hypertext differs in that, for example, it cannot be recited.While most print text which follow a linear argument and put less emphasis on a visual and spatial presentation can be turned back into an oral linear presentation (though scholarship with interest in typography and visual literature - as well as deconstruction - would strongly argue against the simplification of print as a secondary status as mere recording function of speech) hypertext cannot be turned back into a linear print or spoken text in its entirety, but only ever as one realisation - leading to a simple definition of electronic hypertext that 'if it can be printed out, it is not a hypertext'.

[12]Michael Heim, *Electric Language: A Philosophical Study of Word Processing* (New Haven and London: Yale University Press, 1987), p.60.

narrative for a second time. Once read, text disappears, to be retrieved only with difficulty and some active memorizing has to take place.

While writing technology makes a non-linear arrangement possible, it also encourages long linear arguments and traditional beginning - (complex and long) development - end plot narratives, because of the spatial presence of a text and the possibility always to go back and reread. Orality does not favour such an arrangement, instead it favours an episodic structure as the natural way to tell a lengthy story, if only because the experience of real life is more like a string of episodes than it is like a Freytag pyramid (of exposition, climax and solution). Walter Ong has argued for a strong link between developments of printing technology and the rise of the novel format: "The print world gave birth to the novel, which eventually made the definite break with episodic structure."[13]

Hypertext goes back to an episodic structure, favoured not only because of its affinity to (post)modern ideas of fragmented and multilayered life and an absence of grand narratives for the expression of which the novel no longer seems appropriate, but also because of its parallels to oral (episodic) text in which only a short portion of the text is directly present in the moment of narration / on the screen.

Interactive Storytelling

In an article that asks the very pertinent question as to whether it could be that "storytelling doesn't work very well if the user can interfere with it" and looks critically at new so-called interactive artforms, Charles Platt gives an example of the open-endedness and flexibility that can be so appealing about oral narratives:

> As Barbara Hayes-Roth has pointed out, any parent who has made up a story for a child knows that the child likes to have some control over it. The parent begins: "Once upon a time, there was a rabbit." "His name was Thomas!" says the child (whose name happens to be Thomas). "Yes, his name was Thomas. And he lived in a burrow -" "In a field? Was it in a field?" "A big green field. And he had a friend - do you know what the friend's name was?" "Um - Samantha." "All right. One day, Thomas and Samantha went of to gather blackberries." "But rabbits don't eat blackberries. Rabbits eat grass." "Most rabbits eat grass, but these were special rabbits." In this way, parent and child collaborate, and the story evolves interactively.[14]

[13] Walter Ong, ***Orality and Literacy*** (London and New York: Methuen,1982), p.149.

[14] Charles Platt, "Interactive Entertainment: Who writes it? Who Reads it? Who Need it?", ***Wired***, vol.3, no.9 (September 1995), 145-149, 195-197 (p.147).

This element of improvisation, of evolution of a narrative based on feedback, the infinite and unpredictable possibilities of story development and personal influence on it in a kind of conversation are the appeal of this kind of oral story telling. An electronic text can give some of this unpredictability back. While a print text is physically present and its developments towards an inevitable end are always already written[15], an electronic text (with only the current position in the text present and the 'end' still in the computer memory to be retrieved on the fly) can give, in a well-written and structured hypertext, the impression of influence on its development.

The Magic Spell

Despite the attraction of the conversation-like approach to developing a personalised story, one can also identify its disadvantages. In the same article in which Charles Platt gives the Thomas-the-Rabbit example, he counterargues that frequent interaction can also break the magic spell of storytelling, can be an interruption to the delicate construction of a well-told story instead of a welcomed and fruitful intervention:

> Consider the origins of storytelling. Beside a crackling fire, Og the Barbarian mesmerizes his people with a gripping narrative. He begins: "Once there was a warrior who lived far, far away in a tribe that cast him out into the wilderness." A little kid pipes up: "How far away did they live? Was it the other side of the mountain?" The child's mothers shushes him. "Be quiet! Og's telling a story! Don't spoil it!" And this is the point: as soon as you let the audience interrupt, it can spoil that strange state of belief - the magical spell of immersion - which a great storyteller creates.[16]

Here it is the unknown development, the carefully controlled pace and the surprise twists and turns of the narrative - the "magical spell of immersion" - that are threatened by too much audience participation, which not only interrupts, but makes the audience aware of the fictional, made-up character of the story. There seems to exist a delicate balance, if not contradiction, in storytelling between immersion and interaction, and it has been argued from both readers' and authors' side that the traditional roles should not be shifted too much towards intervention.

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[15] a notion played with for example by Jane Austen, who comments on the inevitable arrival of the end that announces itself by the steadily diminishing number of pages left to read in *Northanger Abbey* ("The anxiety, which in this state of their attachment must be the portion of Henry and Catherine [...] as to its final event, can hardly extend, I fear, to the bosom of my readers, who will see in the tell-tale compression of the pages before them, that we are all hastening together to perfect felicity") (New York: Prestige Book, 1968), p 347.

[16] Charles Platt, "Interactive Entertainment: Who writes it? Who Reads it? Who Need it?", *Wired*, vol.3, no.9 (September 1995), 145-149, 195-197 (p.147).

In a thread in an usenet-discussion group on the question of interactivity and whether readers really want it, a contribution by Kathryn Cramer provided a poignant comparison to illustrate why readers might not want too much influence on the narrative and prefer to have narrative suspense created for them by authors:

> The audience/creator roles have something to do with territoriality. If I were invited over to your house for dinner, I would be somewhat annoyed if I arrived to find, rather than meal preparation in progress, boxes of dishes, a pile of furniture waiting to be arranged, and a few bags of groceries. If you invite me over, you are supposed to have taken care of a number of things before I arrive [...]. Yes, I can cook, unpack dishes, arrange furniture, etc. but while I wouldn't have minded chopping up a few vegetables or making a salad, most of this is the responsibility of the host[17].

Similarly, confronted with the hypertext system HyperCard, Lewis Shiner, an author of far from conventional, complex, multi-layered science fiction books, tries to explain why its possibilities make him feel uneasy and gives these revealing comments:

> Listening to your discussion about HyperCard and the potential it offers for future narrative, I discovered something I never consciously articulated before - not even to myself. I found that I strongly believe that there's a perfect and final form for every piece of fiction I do. I'm not interested in having alternative versions or expansions or contradictions available. If I make a change in my fiction, I'm changing it for a reason.[18]

Both these quotations reveal a lot about the mental barriers to interactivity that exist both on the side of reader (the desire to be entertained) and on the side of authors (the desire to keep control over "their" story). But, apart from the question whether greater audience intervention is desirable or not, there are also technical problems which need to be considered.

The Illusion of Interactive Conversations

> ***There are grounds for arguing that no truly interactive system of any sorts exists [...] - since true interaction implies that the user responds to the system at least as often as the system responds to the user and, more important, that initiatives taken by either user or system alter the behaviour of the other.[19] (Michael Joyce)***

One of the earliest studies in artificial intelligence with the aim to simulate a conversation

[17] Kathryn Cramer in a posting ("Re: Practitioners of non-electronic hypertexts") to the ht_lit mailing list on Tue, 11 April 1995.

[18] quoted by Stuart Moulthrop in: "Electronic Fictions and 'The Lost Game of Self.'", *New York Review of Science Fiction* , no.66 (February 1994), 1, 8-14 (p.10).

[19] Michael Joyce, *Of Two Minds: Hypertext Pedagogy and Poetics* (Ann Arbor: The University of Michigan Press, 1995), p.135, [though already quoted in Stuart Moulthrop ""Hypertext and 'the Hyperreal'", *ACM Hypertext '89 Proceedings* (New York: The Association for Computer Machinery, 1989), 259-266].

between computer and user was the ELIZA programme, developed by Joseph Weizenbaum in the Artificial Intelligence Laboratory at M.I.T. in 1966. ELIZA is a language-recognition programme that can identify reader's input and responded to the user/reader/player/patient in the manner of a non-directive therapist (or, as Niesz and Holland call it "the "Uh-huh, tell me more" method of Carl Rogers[20]).

While impressive in its responses (it is perfectly possible to be fooled into believing that one is confronted with a real "intelligent" analyst - as is the character of Robin Dempsey in David Lodge's novel *Small World*[21]), the system is far from perfect and can, through input that does not confirm to the parameters the system can analyse and respond to, be exposed as merely a pretence conversation. Though Norman Holland has recently argued that ELIZA represents a genuine, rather than just a symbolic collaboration between author and reader[22] , I would like to argue the contrary. Any system can only ever react to users' input with a set of preprogrammed responses and not with the genuine response which it should have in order to achieve real conversation-interaction.

One of the reasons why the conversations / stories generated by the interactive systems have not (yet) been met with the anticipated audience appreciation is that research into Artificial Intelligence has not yet advanced to a degree where a computer can generate sophisticated enough (and therefore convincing) responses to a conversation, let alone a literary text. But however elaborate and accurate these systems could be programmed, the fact remains that any such system can only ever give the impression of a two-way communication. While the reader-to-text-feedback, the constant re-adjustment of reader's understanding and expectation of the text is always genuinely present, the text-to-reader feedback is limited to what Stuart Moulthrop describes as "hardwired

[20] Anthony J. Niesz and Norman N. Holland, "Interactive Fiction", *Critical Inquiry*, vol.11, no.1 (September 1984), 110-129 (p .116).

[21] David Lodge, *Small World* (Harmondsworth: Penguin, 1985). Robin Dempsey gets hooked completely on the ELIZA-system after he has been introduced to it and throughout the novel spends increasingly time not at his desk but in the computer lab.

[22] In an article entitled "ELIZA Meets the Postmodern", he argues: "The final 'work of art' is a conversation that results from what the reader puts into the program. This final text will be variable, different for every reader and different for every 'reading' by the same reader. this work of art has not clear boundaries between reader, writer and text." quoted in: Marie-Laure Ryan, "Interactive Drama: Narrativity in a Highly Interactive Environment", *Modern Fiction Studies*, vol.43, no.3 (Fall 1997), 677-707 (p.702). For a further discussion of ELIZA and subsequent development of the idea see Janet Murray, *Hamlet on the Holodeck* (New York, London, Toronto, Sydney, Singapore: The Free Press, 1997).

responses in varying numbers".[23] Even highly sophisticated reactive environments only react, they do not input themselves.

Despite Tristram Shandy's statement that "writing, when properly managed, is but a different name for conversation"[24], an approach to interactivity based on a very literal attempt to re-create the conditions of a conversation appears doomed to fail. But 'conversation' is not the only approach to interactive environments. Other forms have been explored, most prominently that of performance and, in a very different direction, that of exploration in games.

3.2.2: Interactivity as Performance: Drama

> *The reader/listener/viewer has to fill in the symbols, the metaphors, the structure and the narrative of the text with his/her own experiences or fantasies. S/he has to perform the text on an "inner stage" like a drama or a piece of music. The text is a scenario, which only comes alive through the active participation of the reader.*[25] *(Jørgen Bang)*

While the interactivity-as-conversation metaphor is based on the oral characteristic of the electronic medium, the performance comparison puts greater emphasis on the written aspects of electronic fiction: that of written work (the computer program in interactive fiction or the network structure in a hypertext) and stresses especially that of individual 'performances', the individual reading which is always only one of many possible realisations of the structure.

Howard Rheingold speaks of on-line writing in computer networks (eMail, and especially bulletin boards and usenet-groups) as "written conversation as performing art". The writing happens real-time, i.e. without the temporal distance between the act of

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[23]Stuart Moulthrop: ""Hypertext and 'the Hyperreal'", *ACM Hypertext '89 Proceedings* (New York: The Association for Computer Machinery, 1989), 259-266. The frustration about this kind of pretend feedback is summarised in rather strong words by Martin Schecter in an article on interactivity on the altx-website:

> If[...] anyone who thinks that while choosing link A rather than link B in SEYMORE BUTTS 2, they're somehow coming up with some kind of goddamned original artistic experience that no one had ever pre-planned and plotted for them is more goddamned naive than the primitives who think the people in a photograph have been magically shrunk into two dimensions by some supernatural spell.

[24]Laurence Sterne, *The Life and Opinions of Tristram Shandy* (London: Penguin, 1985; first published 1759-1767, vol.2,chp.11, p.127.

[25]Jørgen Bang, "The Meaning of Plot and Narrative", in: *The Computer as Medium*, ed.by Peter Bøgh Andersen, Berit Holmqvist and Jens F. Jensen (Cambridge, Cambridge University Press, 1993), pp. 209-36, (p.230).

production and the act of reception that usually exists in writing (but not in theatre performances) and is directed to an unknown number of readers, some active, most passive. Writing on-line enters the public sphere more immediately and, in a medium that allows direct feedback, it becomes a sort of performing art in which an audience willing to interact can suggest, feedback and criticise, a new combination of the "private" print-medium with the "public" aspects of performing arts. Or, as Michael Heim argues:" "Computerised writing combines the subjective immediacy of the private thought process with the public, typified look of the written text." [26]

This "sense for groups, immeasurably larger than those of primary oral cultures"[27] that Ong identifies as a characteristic of second orality does, however, only apply to networked and on-line writing, as has rightly been pointed out by both Howard Rheingold and Myron Tuman[28]. So far not much electronic fiction, apart from collaborative fiction discussed in the next chapter, has been produced in this spontaneous, 'public' way. Hypertext fictions are often distributed on disk or, even if published on the internet, are already in a relatively finished form, and interactive fiction games are played/read by individual readers usually in the privacy of their own homes. The question therefore is if, while a functioning metaphor to describe some of the characteristics of electronic writing, it can be used as a base on which to imagine and construct working interactive literary environments?

Brenda Laurel, who in her seminal book *The Computer as Theatre* uses the drama metaphor throughout to illustrate her ideal of a working interface design, warns that the drama parallels should not be taken too literally, or else they lose all the theoretical subtlety and usefulness. She argues:

> Users, the argument goes, are like audience members who are able to have a greater influence on the unfolding action than simply the fine-tuning provided by the conventional audience response [...]. The users of a[n interactive] system are like

[26] Michael Heim, *Electric Language: A Philosophical Study of Word Processing* (New Haven and London: Yale University Press, 1987), p.193.

[27] Walter Ong, *Orality and Literacy* (London and New York: Methuen,1982), p.145.

[28] Howard Rheingold, *The Virtual Community: Finding Connection in a Computerized World* (London: Secker and Warburg, 1994); Myron Tuman argues that networks are vital for the "transformation of the computer from writing to communication tool, and by extension, the transition from the writer as solitary figure to the writer as someone regularly in touch with people of similar interests." (*Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.85.) Both Colette Daiute and especially George P. Landow have argued for the consequences and possibilities this communal environment can have on teaching and students' co-operation.

audience members, who can march up onto the stage and become various characters, altering the action by what they do in their roles. [...] Let's consider for a minute. What would it really be like if the audience marched up on the stage? They wouldn't know the script for starters, and there would be a lot of awkward fumbling for context. Their clothes and skin would look funny under the light. [...] The problem with the audience-as-participant idea is that it adds to the clutter, both psychological and physical.[29]

To involve readers/audiences directly and immediately into the narrative action by giving them character parts, leads either to scenarios like MUDs (**M**ulti-**U**ser **D**ungeons) computer environments in which participants assume certain characters and conduct real-time conversation (or one could say: collaborative dramas) in a fictional environment[30] . Though MUDs have been suggested as a format more interactive than hypertext or interactive fiction and have been discussed in a context of electronic literature[31], they lack many of the features associated generally with literary texts - such as planned development, character coherence, plots or episodes, but rather resemble conversational games which happen to be conducted in a text-based medium[32] .

Alternatively, an interactive drama in which the audience can play the part of a character can be imagined, resembling Ray Bradbury's ***televisors*** in ***Fahrenheit 451***, which are embedded in households' walls, and which enable housewife viewers to converse with

[29] Brenda Laurel, *Computers as Theatre* (Reading, MA.: Addison-Wesley, 1991), p.16. It is interesting to note here that Marie-Laure Ryan uses this quote in a different context. She argues for the possibility of interactive drama in the format not of hypertext or text-based interactive games, but of MUDs and Virtual Reality. She fails, however, to quote Laurel's entire argument, but cites only the first half to give the impression that Laurel argues for "audience members who can march up on the stage", rather than expressing scepticism. Marie-Laure Ryan, "Interactive Drama: Narrativity in a Highly Interactive Environment", *Modern Fiction Studies,* vol.43, no.3 (Fall 1997), 677-707 (p.678).

[30] Due to lack of space and also experience of the subject, MUDs have been largely ignored by this thesis, which should not at all mean that I consider them as unimportant. The MUD-enviroment is described by Ryan as follows: Many writers work together to create the world, often a building or built environment with a specialized area devoted to each activity. These same and other users then occupy the rooms together and separately and leave behind textual traces. In a typical MUD, a user adopts a persona, consisting of a name (say Luke Skywalker or Madonna) and a set of characteristics. She then travels from room to room. If she types a sentence in quotation marks, that sentence is broadcast as her utterance to the other characters in the same room. That is, every other user sees on her screen: "Luke Skywalker says: '...'." The user's typed sentence becomes one voice in the conversation of a collective fiction. Each user becomes a textually realized character and the other characters respond to the text she generates. (see Bolter: "Degrees of Freedom" at: `http://www.gatetech.edu/lcc/idt/Faculty/bolter/degrees.html` (1/4/1996)).

[31] for example: Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self.'", *New York Review of Science Fiction* , n.66 (February 1994), 1, 8-14 (p.13), or Marie-Laure Ryan, "Immersion vs. Interactivity: Virtual Reality and Literary Theory", *Postmodern Culture*, v.5 n.1 (September 1994), (electronic journal) at: http://jefferson.village.Virginia.EDU/pmc/issue.994/ryan.994.html (12/1/1996), or Bolter's "Degree of Freedom".

[32]A fact that is already changing. In her article, Marie-Laure Ryan describe developments in "interactive drama" as a continuation of text-based MUDs in the realm of Virtual Reality. ("Interactive Drama: Narrativity in a Highly Interactive Environment", *Modern Fiction Studies,* vol.43, no.3 (Fall 1997), 677-707).

on-screen characters by reading from scripts in answer to their cues, or the Shakespeare CD-ROMs that have a built-in "Karaoke" feature, that allows users to perform their favourite scenes from the play with their favourite actors. These forms of interactivity and performance which, while great fun to participate in and, in the case of Shakespeare, can have a pedagogical function, are much closer to games than to a literary genre.

Interactive Fiction: Exploration and Immersion

Andy Cameron suggests that a search for interactive literature cannot be executed without reference to computer games[33], and that a number of early writings focused on text-based games as a format more obviously in a literary tradition than the artificial intelligence experiments of the Eliza-type[34]. In his discussion of games, literature and interactivity, he emphasises the ludic, real-time participatory elements of games and uses them to define interactivity.

> *The underlying principle of the interactive novel is not that the computer becomes the user's pet author, writing books that suit its owner's particular tastes, but that the imaginary world of a novel, the world through which the novel treads just one path, the path of its narrative, can be turned into a virtual world. The computer, then, provides the means of navigating this world. The user flies through it as he or she might fly through an artificial landscape in a flight simulator, plotting a path that is, in effect the narrative of their own, personalised novel*[35] *(Benjamin Wooley)*

Interactive novel (also variously called computnovel or participatory novel) is perhaps not the most appropriate term for the kind of text-based adventure game Benjamin Wooley is referring to in the above quote, since it presumes a similarity to a certain, relatively rigidly defined genre, and more often terms like interactive games or interactive fiction can be found. Two interesting points are worth observing in his quote: firstly, the use of visual metaphors, of plotting paths, of flying through a virtual world, suggesting both the power of the textual imagination to suggest and create those vivid textual spaces in the mind, but also hinting at the increasing dominance of graphics in computer games, in

[33] Andy Cameron,"Dissimulation: Illusions of Interactivity". at: `http://www.wmin.ac.uk/media/VD/Dissimulations.html` (3/3/1996), printed in an altered version in *Mute*, (Spring 1995), p.10.

[34] Edward Rothstein, "Participatory Novels", *New York Times Review of Books*, 8 May 1983, p.39; Anthony J. Niesz and Norman Holland, "Interactive Fiction", *Critical Inquiry*, vol.11, no.1 (September 1984), 104-112; Jane Y. and Gordon Howell, "The Evolution of Interactive Fiction", *Computer Assisted Language Learning: An International Journal*, vol. 2 (1990), 93-109.

[35] Benjamin Wooley, *Virtual Worlds: A Journey in Hyper and Hyperreality* Oxford: Blackwell, 1992), p.155.

which visual seemingly three-dimensional surround scenarios have replaced the limited text world and navigation commands of early text-based games.

A second interesting point is the move away from an emphasis on conversation, as the personalised exchange between reader and computer, towards a metaphor of exploration, of a space or narrative created by the computer partly in reaction to the reader's input. Wooley explores this point further and argues that interactivity should be defined

> "not as a conversation between a natural and an artificial intelligence, but as an exploration of some form of cyberspace. "I believe that conversation is the wrong model for dealing with a computer" wrote John Walker, the enigmatic founder of the software company Autodesk. "Since inception we've seen computers as possessing attributes of human intelligence ("electronic brains", and this has led us to impute to them characteristics they don't have, then expend large amounts of effort trying to program them to behave as we imagine they should. When you're interacting with a computer, you are not conversing with another person. You are exploring another world."[36]

The aim of Interactive Fiction is therefore not so much to develop narrative strands in collaboration with its readers, but to create a textual space, mapped out by an author and navigated by readers. This, in consequence, has an effect on the position of the author which shifts in relation to the reader and to the text. While authors never have total control over their work, they usually play a major part in the execution of the physical creation process, even in the random cut-up collage or the OuLiPo automated writing formulae. The author of interactive fiction must step back and write programs that the users execute. The author is writing the rules, creating scenarios and the underlying program structure while the execution of the resulting program is the task of the reader/player and the computer.

3.2.3: The History of Interactive Fiction

The term "Interactive Fiction" is usually applied only to electronic texts and often even more limited to a specific type of adventure story/game similar to the "Choose Your Own Adventure" children's books discussed in previous chapters.In the "Interactive Fiction" newsgroup, one of the discussion groups on the internet, Interactive Fiction is defined

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[36]Wooley, *Virtual Worlds:*, p.154.

as follows:

> There are many forms of Interactive Fiction, but the one thing they have in common is that the reader is allowed some degree of interaction with the story. When we talk about IF in this news group, we usually are talking about computer-based works of fiction. A traditional book is not interactive -- you just read it from front to back, and read the same text every time. [...] One goal of IF developers is to take advantage of the flexibility of the computer to facilitate the creation of new forms of entertainment.[37]

First developed in the late 1960s (such as *Adventure*, created in the Stanford University's Artificial Intelligence Lab and located in a fantasy world inhabited by elves and wizards)[38] these games were commercially distributed and made widely available for personal computers in the late 1970s. *Zork*, for example, according to Charles Platt the first commercially distributed interactive adventure game, originally written 1977 "by some playful MIT [Massachusetts Institute of Technology] students using a US$400,000 mainframe"[39], was released commercially in 1980, came out on CD-ROM with graphics in 1993 and is still available in many commercial and shareware versions.

```
You are standing at the end of a road before a small brick building. Around
you is a forest. A small stream flows out of the building and down a gully.
```

This is the beginning of *Adventure*, one of the first, and possibly best known of traditional interactive fictions. Developed as early as 1970 and a decadent undertaking when computing time on huge mainframe computers was rare and expensive, the program understands a basic vocabulary of one or two word commands. The aim is to finish the game by navigating through the landscape described and solve all the problems and puzzles encountered. For this, it is often required to navigate the space in a certain order to pick up necessary items or get certain information needed at a later point, causality and linearity which stand in tension with the otherwise spatial nature of the game.

[37] FAQ of the Interactive Fiction Newsgroup at: `http:\\www.if-infocom/FAQ`.

[38] Wooley, *Virtual Worlds:*, p.155.

[39] Charles Platt, "Interactive Entertainment: Who writes it? Who Reads it? Who Need it?", *Wired*, vol.3, no.9 (September 1995), 145-149, 195-197 (p.146).

For versions of both Adventure and Zork see: `http:\\www.shareware.com` .

After an initial description of the scene the computer will prompt readers for input

? *enter building* [player's input in italics]
You are inside a building, a well house for a large spring.

There are some keys on the ground here.
There is a shiny brass lamp nearby.
There is food here.
There is a bottle of water here.
? *take keys*
Ok.
? *leave*
You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.
? *downstream*
You are in a valley in the forest beside a stream tumbling along a rocky bed.
? *downstream*
At your feet all the water of the stream splashes into a 2-inch slit in the rock. Downstream the streambed is bare rock.
? *downstream*
You are in a 20-foot depression floored with bare dirt. Set into the dirt is a strong steel grate mounted in concrete. A dry streambed leads into the depression.

The grate is locked.
? *keys*
What do you want me to do with the keys?
? *open grate*
The grate is now unlocked.

Failing to explore the building and to pick up the keys results in the following variant of the game.

[...]
You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.
? *downstream*
You are in a valley in the forest beside a stream tumbling along a rocky bed.
? *downstream*
At your feet all the water of the stream splashes into a 2-inch slit in the rock. Downstream the streambed is bare rock.
? *downstream*
You are in a 20-foot depression floored with bare dirt. Set into the dirt is a strong steel grate mounted in concrete. A dry streambed leads into the depression.

The grate is locked.
? *open grate*
You have no keys!

Despite the term 'interactive novel' or 'interactive fiction', this genre of computer writing lays relatively little claim to being a literary experiment, stressing the element of immersion and participation rather more than the element of distance and reflection generally associated with innovative forms of writing.

A number of differences between these games and other literary experiments, both in print and as electronic form, become visible even from this short extract.

First of all they both work in different time-frameworks. Literature, even if set in the present tense, seems to the reader to represent something that has already happened and is being retold to us, whereas interaction in games gives the impression of happening in real-time in the present. Andy Cameron argues:

> The moment the reader intervenes to change the story [...] is the moment when the story changes from being an account of events which have already taken place to the experience of events which are taking place in the present. Story time becomes real time, an account becomes an experience, the spectator or reader becomes a participant or player, and the narrative begins to look like a game.[40]

Furthermore, to achieve this effect of immediacy and participation and supporting the emphasis on immersion rather than mediated distance, interactive fiction games are generally defined by 2nd person story-telling, a format hardly ever used in other forms of fiction.

Also noteworthy are the "different cultural values"[41] attached to literature and games. While the first is associated with lasting significance and written for an invisible / unknown audience for the future, games are more for the present, "outside of history, unworthy of serious remembrance". Unlike games, literature is today also regarded as a symbol of culture (see final chapter) and worthy of preservation.

And lastly, as Niesz and Holland argue, there is a difference between the feeling of mystery or control a reader/player can achieve about the fictional world of Dickens or James and the fictional world of an interactive fiction. While a reader of the first "is likely to feel that the fictional world she has inferred from the novel is in some final sense mysterious and unknowable, beyond her grasp", by contrast with the latter a reader "is likely to feel that she can know and master this fictional universe"[42]. This feeling of control and full understanding, that is neither available nor desirable in most types of

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[40] Andy Cameron, "Dissimulation: Illusions of Interactivity". The essay can be found at: `http://www.wmin.ac.uk/media/VD/Dissimulations.html` (3/3/1996) and was printed in an altered version in MUTE, Spring 1995.

[41] Cameron, "Dissimulation: Illusions of Interactivity". at: `http://www.wmin.ac.uk/media/VD/Dissimulations.html` (3/3/1996) - no page numbers.

[42] Anthony J. Niesz and Norman N. Holland, "Interactive Fiction", *Critical Inquiry*, vol.11, no.1 (September 1984), 110-129 (p .122).

fiction, is the ultimate goal of the genre that Niesz and Holland describe so enthusiastically in their essay: the finite, puzzle-solving type of interactive fiction, which stands with this in complete opposition to the more recent, complex and inherently unsolvable and vexing experiments of later "postmodern" hypertexts such as those discussed below.

How do these games come to their name of interactive fiction? Why the feeling that "though 'just' a game, playing it is a bit like reading a novel"?[43] After all the literary quality of the descriptions is rather functional, the narrative suffers, as both Rieser and Cameron[44] point out, from too many 'cardinal functions' (narrative hinge points), not enough 'indices' (referring to character and atmosphere) and 'catalysers' (which add depth and form to the narrative between cardinal points)[45]

The literariness of interactive fiction can not only, as Niesz and Holland argue, be explained through the fact that it is text-based and therefore has to be read[46] , but through the consequences this has on the experience of the adventure. Though the aim of the game elements of interactive fiction, in no text-based adventure is it possible to become completely immersed in the scenario and the adventure. It can never offer direct unmediated immersion, but at every prompt forces players/readers to be reflective not only about the narrative but also about its construction. Janet Murray identifies immersion ("the sense of being transported into another reality"), rupture ("entranced attachment to the objects in that reality", the addictive qualities of many games) and agency ("the player's delight in having an effect on the electronic world" - possible because he can make choices) as three desirable criteria in the design of (interactive) games. A list about which Charles Platt comments: "Clearly, plain text does not offer

[43] Wooley, *Virtual Worlds* , p.156.

[44] Cameron, "Dissimulation: Illusions of Interactivity". at: `http://www.wmin.ac.uk/media/VD/Dissimulations.html` (3/3/1996) - no page numbers; Martin Rieser, "Interactive Narratives: A Form of Fiction", *Convergence*, vol.3, no.1 (Sping 1997), p.10-19.

[45] This terminology is based on Roland Barthes' essay "Introduction to the Structural Analysis of Narratives" in: *Image, Music, Text*, selected and translated by Stephen Heath (London: Fontana Press, 1977). In *Narrative Fiction* Shlomith Rinnon-Kenan (1983) uses a similar distinction of those events that "advance action by opening an alternative (kernels) and those that expand, amplify, maintain or delay the former (catalysts)" (Shlomith Rimmon-Kenan, *Narrative Fiction: Contemporary Poetics* (London and New York: Routledge, 1983), p.16.

[46] Anthony J. Niesz and Norman N. Holland, "Interactive Fiction", *Critical Inquiry*, vol.11, no.1 (September 1984), 110-129 (p .125).

these pleasures. The world of a novel can be very compelling, but reading about it can't equal the feeling of being immersed in the aural and visual world of Myst, Doom or Simcity"[47]

This dichotomy of immersion more easily created with graphics vs. the distance of the text is illustrated in a very interesting side remark made by Berit Holmqvist and Peter Børgh Andersen, who outline in an essay their attempts to write literary interactive fiction. After having decided on a basic script, analysed the narrative structures and identified decision points at which they wanted the reader not only to choose but also to enact the next step they argue: "The story had to be based on drawings, because verbal interaction would create a distance that we wanted to avoid"[48]

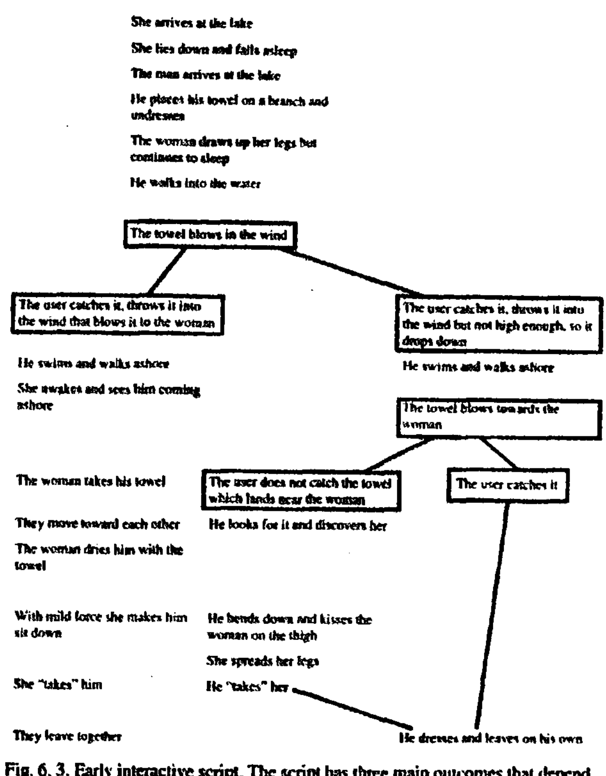

Fig. 6. 3. Early interactive script. The script has three main outcomes that depend upon the reader's actions.

They want their users to pick up the virtual towel thrown over by the virtual heroine and then decide whether to throw it or not and react accordingly with a physical action.

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[47] Charles Platt, "Interactive Entertainment: Who writes it? Who Reads it? Who Need it?", *Wired*, vol.3, no.9 (September 1995), 145-149, 195-197 (p.149).

[48] Peter Bøgh Anderson, Berit Holmqvist and Jens F. Jensen (eds.), *The Computer as Medium* (Cambridge, Cambridge University Press, 1993), p.154. Niesz and Holland predict the tendency towards visual elements in their essay, for them, however, they have the status of "television-quality illustrations". "Future Tenniels and Phizes will draw with a laser beam" they claim, positioning graphics in the role of illustrations that provide additional information and are of inferior importance to text, rather than as replacing it. Which shows on the one hand how hard to predict the speed of the development and its direction has always been, but also how bound into the book culture and its traditional text- illustration hierarchy Niesz and Holland are. Anthony J. Niesz and Norman N. Holland, "Interactive Fiction", *Critical Inquiry*, vol.11, no.1 (September 1984), 110-129 (p .115).

Throughout this book I have not argued for the personification of the computer, but for its invisibility.[49] *(Brenda Laurel)*

Apart from the ability to modify the (fictional or virtual)-environment one condition for immersion is the disappearance of the medium. The computer needs to be transparent, has to give the impression of unmediated experience, something difficult to achieve fully in text-mediated hypertext, where the medium tends to stand in the foreground.

If immersion and unmediated experience are the ultimate goal, the traditional format of text-based interactive fiction can only be partially satisfactory. Consequently, while the format of text-based interactive fiction is still around, interactive games have, in the wake of more powerful computers with greater graphic capacities, been increasingly substituted by graphic-based games[50] and other forms of literary electronic fiction have become more prominent over the last ten years. It is no surprise that most games, such as the above mentioned Doom and Myst, are now visual and aural with minimal amounts of text[51], which seems to suggest that the genre of interactive fiction that emerged as text-based was due to the initially limited capabilities of computer technology rather than any inherent virtue, an argument that is supported by the fact that research of the games industry has been and still is the driving force behind graphics development.

Postmodern Hypertexts

Losing oneself in a fictional world is the goal of the naive reader or one who reads as entertainment. It's is particularly a feature of genre fiction, such as romance or science fiction[52] *(Jay David Bolter)*

While reminiscent of certain forms of literature in its aim of constructing an alternative

[49] Brenda Laurel, *Computers as Theatre* (Reading, MA.: Addison-Wesley, 1991), p.143.

[50] Richard Gees is worried about these trends and rightly argues to be cautious to associate more graphics with greater interactivity. In the 'text only' vs. 'image rich multimedia' debate he argues for 'text only', and deems images as very dominant and not beneficial to the imagination: "If hyperfiction is meant to be interactive, mightn't the most interactive hyperfictions be those text-only works that give the maximum potential mind-held?" ("Notes on Hypertext: One Artist's State, 1992-1994", *New York Review of Science Fiction* , no.72 (August 1994), 1, 8-10.

[51] In a reverse development to that predicted by Niesz and Holland - who, while they realised that graphics were about to become more important, nevertheless only assigned them a purely illustrative role - text plays now are secondary role in relation to the visual information, either explanatory or to give a background story into the context of which the action of the game can be placed.

[52] Bolter, Jay David, *Writing Space: The Computer Hypertext and the History of Writing*, (New York: Laurence Erlbaum, 1991) p.155.

world, the immersion-ideal of interactive fiction contradicts other forms of literary experiment in which the trend has been towards opacity, the destruction of illusion. Unlike games which want to draw players closely into the narrative and its puzzles, other forms of hyperfiction aim for the contrary. While the terms interactive fiction and hypertext narrative were initially used interchangeably at the beginning of the hypertext debate[53], a distinct genre of fiction emerged that used hypertext and swiftly established a direction very different from the games of traditional interactive fiction. Text such as Michael Joyce's *afternoon* , Stuart Moulthrop's work[54] and other fictions centred round the publisher and software house Eastgate, differ mainly in three points from more conventional interactive games: instead of working towards the very definite aim of the puzzle-solving approach, they work against closure by adopting the strategies of open-ended, non-linear loops or mosaic narratives outlined previously. While still favouring the metaphor of exploration of the narrative space over that of conversation, this exploration is one where disorientation is seen as a virtue rather than a mistake and where it becomes an aim in itself, a process through which readers construct a narrative rather than reconstruct the already given and predetermined scenario of interactive fiction.

But, most importantly, this form of hypertext fiction calls for a different type of involvement, not one of immersion, but of reflection, or, in the terminology that Jørgen Bang suggests, it works in a "contemplative mode of reception" rather than in a "fascinative"[55] mode. Drawing on Umberto Eco's concept of 'open' and 'closed' texts, Bang identifies 'closed' texts, such as games of interactive fiction, that work through fascination, want to draw readers into the story with the effect of giving up control over the self. Other text, 'open texts' (and he fits hypertext fiction into that category) encourage reader to be more reflective, not to give up control and to position and consider their own (reading) experience in relation to the fictionalised representation, a

[53] As for example in Jane Yellowlees Douglas article "Where the Senses Become a Stage and Reading Is Direction: Performing the Texts of Virtual Reality and Interactive Fiction", *The Drama Review* , vol.37 no.4 (Winter 1993), 18-37 (p.22).

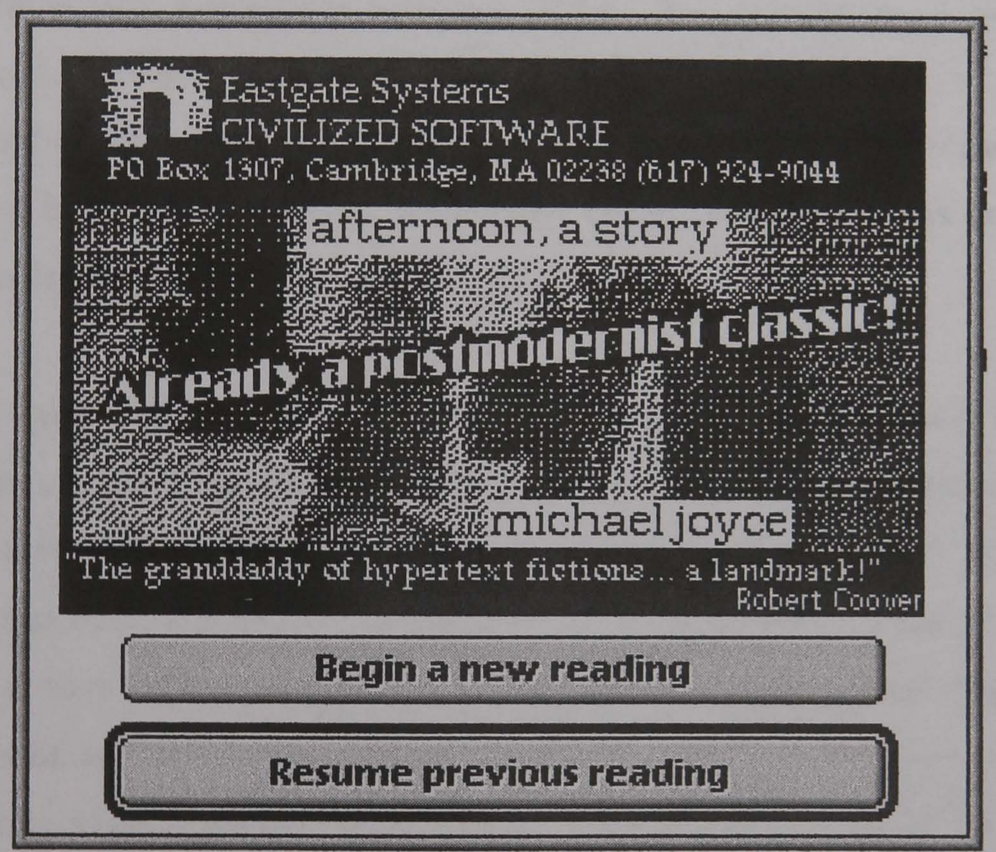
[54] one of which, *Forking Path,* was discussed in the previous chapter; another, *Victory Garden,* is still available commercially and has been highly influential in the shaping of the genre.

[55] Jørgen Bang, "The Meaning of Plot and Narrative", in: *The Computer as Medium*, ed.by Peter Bøgh Andersen, Berit Holmqvist and Jens F. Jensen (Cambridge, Cambridge University Press, 1993), pp. 209-223. (p.218). Brenda Laurel argues in a similar direction when she extends the traditional characterisation of interactivity by the three variables of "frequency (how often you can interact), range (how many choices there are available) and significance (how much the choices really affect matters)" by the factor of sensory immersion, i.e. whether "you [...] feel yourself to be participating in the action of the representation or not" (Laurel, Brenda, *Computers as Theatre* (Reading, MA.: Addison-Wesley, 1991,p .19).

concept reminiscent of Brecht's *Verfremdungseffekt*, Skhlovsky's defamiliarisation and certainly based on many of the findings of reader-response theories.

This is not surprising; authors of these hypertexts are often from a literary academic background and frequently explicitly put themselves into a tradition of deconstruction, post-structuralism[56] and, by turning the definition of interactivity away from immersion to an active, but reflective participation in the construction of the narrative, therefore using what is a disadvantage of text-based interactive fiction game over its virtual reality successors into an advantage.

Michael Joyce's *afternoon, a story*



[56] In fact, two broad areas can be identified, the "academic" hypertext (writers) such as Moulthrop and Joyce, who regard their work as a material manifestation of ideas of deconstruction, using theories of Barthes, Derrida, Deleuze and Guattari as their starting point. On the other hand, as small group of more "playful" text has emerged from a games background, by non-academic (or at least "pop-academic") writers, a group that is best described by the self-given term "avant-pop" , describing the mixture of pop-art and popular culture mixed with an awareness of avant-garde art, literature and music, and that perceives itself in a tradition of avant-garde practice and of writers such as Raymond Federman, Ronald Sukenick, Thomas Pynchon and others.

"Games are the enemy" says Michael Joyce, "at least the enemy of literature.[57]

Michael Joyce's *afternoon* has, since its appearance on the hypertext scene in 1987, already become canonical and is a starting point for many discussions of hypertext fiction. The work by this professor of literature is, with 950 lexias and 539 links, of considerable length and marks a move away from the games of interactive fiction that had before been the most prominent and promising experiments in computer literature and reader interaction.

Using stream-of-consciousness techniques and deliberate shifts in narrative voices, Joyce creates a narrative in which we follow the protagonist, a writer, through a summer afternoon. "I want to say I may have seen my son die this morning" is possibly the key sentence in the fiction, a sentence to which paths lead back continuously, but which is never confirmed. He never calls the hospital, never finds out the truth; within the narration of doubt and anxiety and memories we find interwoven memories of friends, of his ex-wife and his analyst as well as highly self-referential digressions on the nature of his story and its hypertextual narration.

afternoon is in many respects very different from games like *Adventure*. Instead of the second person narrative, its narrative perspective is non-deterministic and constantly shifting. There is also, in Stuart Moulthrop's words, "no grail quest", no puzzle to be solved or solution to be achieved. Exploration for the sake of exploration is the aim: "To read *afternoon* is to wander and explore, not to seek and appropriate".[58] Joyce is, in fact, very suspicious of any attempt to achieve a solution or closure in his text and lets the reader know so in a lexia entitled "work in progress" right at the beginning of the reading (see screenshot below). Closure is something the reader has to achieve for him/herself, it is not in the realm of responsibility of the author.

[57]Sarah Smith, "Electronic Fictions: The State of the Art", *New York Review of Science Fiction* , n.63 (November 1993), 1, 8-11 (p.9).

[58]Stuart Moulthrop, "Hypertext and 'the Hyperreal'", *ACM Hypertext '89 Proceedings* (New York: The Association for Computer Machinery, 1989), 259-266 (p.262).

work in progress

Closure is, as in any fiction, a suspect quality, although here it is made manifest. When the story no longer progresses, or when it cycles, or when you tire of the paths, the experience of reading it ends. Even so, there are likely to be more opportunities than you think there are at first. A word which doesn't yield the first time you read a section may take you elsewhere if you choose it when you encounter the section again; and sometimes what seems a loop, like memory, heads off again in another direction.

There is no simple way to say this.

> *There is no single story of which each reading is a version, because each reading determines the story as it goes. We could say that there is no story at all; there are only readings.*[59] *(Jay David Bolter)*

Joyce also refuses responsibility for guiding readers through the textual network. Readers move from one node to another either by following the default path (by hitting the return key), or, more often, by clicking on 'hot words' in the text, words that, in Joyce's terminology , "yield" and hide a link to another text segment. The initial screen, "begin" has, apart from the yes/no option twenty such words, i.e. away from this node lead 22 different paths.

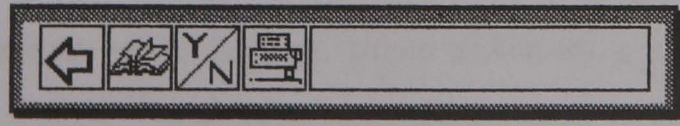
begin

I try to recall winter. < As if it were yesterday? > she says, but I do not signify one way or another.

By five the sun sets and the afternoon melt freezes again across the blacktop into crystal octopi and palms of ice-- rivers and continents beset by fear, and we walk out to the car, the snow moaning beneath our boots and the oaks exploding in series along the fenceline on the horizon, the shrapnel settling like relics, the echoing thundering off far ice. This was theessenceofwood, these fragments say. And this darkness is air.

< Poetry > she says, without emotion, one way or another.

Do you want to hear about it?



[59] Jay David Bolter, *Writing Space: The Computer Hypertext and the History of Writing*, (New York: Laurence Erlbaum, 1991), p.124.

Unlike other hyperfictions, Joyce decides not to indicate these links, hence users have to click on words they feel could 'yield', i.e. could contain a link, to find out. "The lack of clear signals isn't an attempt to vex you," writes Michael Joyce in the booklet accompanying the disk, "rather an invitation to read either inquisitively or playfully and also at depth. Click on words that interest or invite you."[60] Because the 'words that yield' have been decided on by the author in the writing and linking process, readers can easily get into a problematic situation in which words that in their associative chain are interesting or inviting do not carry a connection, whereas vice versa those that do not seem obvious to a reader may have been the author's choice. The frustrating error beeps are consequently an indication of the fact that readers, instead of freely moving around in the space of the text, are actually far from constructing a story outside of the author's control; quite the opposite, they have to try permanently to reconstruct the author's train of thought and recreate his intentions to succeed.

This is not to say that *afternoon* is not on another level an enjoyable read. It certainly works for readers familiar with notions of contemporary literary theory and texts that pose questions about their own structures. The reading of *afternoon* is always a very self-conscious reading. Readers bring to electronic texts the expectations, assumptions and interpretative strategies that they also bring to print narratives, which will automatically be disturbed when they are confronted with this new medium. The medium hypertext has an inherent potential for defamiliarisation and Joyce exploits this fact, and the fact that every reading will, at least in its initial stages, always be a fresh and self-conscious reading, to the full.

While I would not argue that self-conscious reading and interactivity are synonymous, Joyce achieves in his hypertext a move away from the very literal definitions of interactivity previously brought forward. The space explored in Interactive Fiction games is a very literal space (forests, dungeons etc) with very literal commands of exploration (go north, downstream, enter house). Joyce still puts a great emphasis on the necessity of

[60] Michael Joyce, *afternoon: a story*, Storyspace disk for Macintosh (Watertown, MA: Eastgate Systems, 1987), accompanying booklet, p.3. Certain links are also conditional, i.e. only become active after certain other segments have been read, or change their link according to what part of the text has or has not been covered before.

exploration (in his own categories ***afternoon*** is best described as an explorative[61] fiction), but moves it onto a more abstract level of narrative space and, in its self-conscious discussion of its own literary nature, into a closer and more direct context of literary theory.

Interaction with a story can work on a number of levels, on that of the narrative itself, as in plot-branching story, where readers respond at certain prompts to the narrative, or on the level of construction, where in a hypertext with several narrative threads the interaction lies in the moving around in the narrative space. The first, the direct interaction of interactive fictions, can only ever be very limited, creating the false impression of interaction within a framework of fixed plot and preprogrammed outcome.

The latter, more indirect way of interacting with a text is the approach authors of hypertext fiction such as Joyce favour and, with readers rearranging elements, choosing reading order and threading their own path through the narrative, is more related to the general theories of reader-response to which authors of hyperfiction feel a close affinity.

To assume, however, that interactive properties can only be assigned to electronic hypertexts, is a simplification of the complex issue of a reader's influence on the construction of any text and mistakes the physical properties of the printed book with the properties of the narrative structure in the book. Whereas the physical object of the bound book is undoubtedly quite inflexible, to assume that the narrative always goes along with and supports this inflexibility shows a very limited and conservative view of fiction and ignores a large number of printed and bound texts that try to work against the traditions and physical limitations of print and explore alternatives from within their medium.

A traditional concept of narrative does indeed not allow for a lot of interaction. It very much relies on development (of plot and characters) and structure - "a collection of ideas

[61] For Joyce's distinction between explorative vs. constructive hypertext see p.134.

that a writer has carefully selected [...] and organised into a coherent sequence"[62] - and needs an organising agent who provides this and leaves the reader in what seems to be a purely consuming role. "Traditional" literary criticism has therefore for a long time neglected the reader and concentrated nearly entirely on the author and his/her work. It tends to treat the text as a closed entity, an original work by an author who has control over her/his text and puts a certain meaning and intention into it. The reader can then read the text and interpret it either correctly (find out the writer's intention) or incorrectly (missing the point the author wants to make).

More recent developments of literary theory, however, take a different viewpoint. They have "rediscovered" the reader and stressed his/her importance for the creation of the text. Increasing the reader's participation in the creative process, and thereby questioning such distinctions as author/reader, actor/spectator, producer/consumer, has been a major concern of postmodern writing. This does not mean that without these efforts reading would be a purely passive experience: theorists of the school of reader-response criticism have over the last thirty years or so convincingly demonstrated that a world cannot emerge from a text without an active process of construction, a process through which the reader provides as much material as s/he derives from the text. They regard texts as more open, full of "gaps" and without one fixed meaning. Then, it is up to individual readers, each of them with different expectations, different backgrounds and different knowledge, to fill these gaps and to create meaning - or better, meanings, since an extreme view could be that there are as many different texts and meanings as there are different readers. Before I examine further the way in which hypertext theory has appropriated reader-response theories, a short summary of its main points and theorists is necessary.

3.3: Reader-Response Theories

One noteworthy point about postmodern literature (and hypertext fiction) is that it is not only post-modernist and post-war, but also post-reader-response-criticism. Since many of its representatives are not only authors but also critics, theorists and teachers of

[62] Davida Charney, "The Effect of Hypertext on Processes of Reading and Writing", in *Literacy and Computers: The Complications of Teaching and Learning with Technology*, ed. by Cynthia L.Selfe and S. Hilligoss (New York: the Modern Language Association of America, 1994), pp.238-263 (p.238).

literature, it is not surprising that they are highly aware of these developments in contemporary literary theory and the growing importance of the reader and the reading process and make interactivity one of their main concerns. It is therefore important in this context to revisit and reevaluate the theories of Reader–Response Criticism or Reception Aesthetics,[63] whose representatives - while not forming one heterogenic movement - share certain ideas and beliefs about readers' (inter)action with different types of text.

One of these is the belief that in the triangle of relation between author, text and reader, the reader has always been underestimated in other approaches of literary criticism; a New Critical close reading and a Formalist reading put emphasis on the text as a self-contained unit, biographical or intentional approaches to the author. The reader in these theories is necessary, present and able to re-construct the meaning(s) that pre-exist in a text, but s/he is not theorised as an important and active participator who, in the process of reading, constructs the meaning of a text.

Readers do so against the background of a certain knowledge of their world and of literary conventions that are applied to fill the gaps between what is explicitly given in the text and information needed to bring sense and meaning to a text. While reading a text, the reader is all the time engaged in constructing a hypothesis about its meaning, s/he constantly creates a whole set of inferences, assumptions and speculations both in advance about the text yet to come and in retrospect by constantly adjusting these hypotheses in the light of what has been read.

The text is a series of cues to the reader, s/he has to "fill the gaps"[64], which Roman Ingarden in *Vom Erkennen des literarischen Kunstwerk* calls "indeterminacies" (*Unbestimmtheitsstellen*):

> Eine solche Stelle zeigt sich überall dort, wo man auf Grund der im Werk auftretenden Sätze von einem bestimmten Gegenstand [...] nicht sagen kann, ob er

[63] Both terms are frequently used interchangeably - a more precise distinction would be to refer with Reception Theory to the relatively homogeneous Konstanz school of "Rezeptionsästhetik" (reception aesthetics) - with Wolfgang Iser and Hans-Georg Jauss as main representatives; while reserving reader-response theory for the more diverse and only loosely connected group of American scholars who focus predominantly on the reader - such as Stanley Fish, Norman Holland or David Bleich.

[64] a term prominent in Reader Theories, especially in the work of Ingarden, and in continuation, Iser.

eine bestimmte Eigenschaft besitzt oder nicht [65]

This may be the colour of Konsul Buddenbrook's eyes, it may be the brand of tobacco Sherlock Holmes smokes or any other imaginable detail. For Ingarden the existence of indeterminacies is neither coincidence nor a composition error; they are necessary and basic for every work of literature, since it is impossible to describe the unlimited number of characteristics of a person/situation/scenery with the limited number of words a text can provide. A lot of information is given implicitly; Julius Caesar is a man, so he has two arms, two legs, a head, breathes and eats, but even more is not implicit, e.g. how long his arms are and what he eats. In consequence the text cannot be seen as a closed or fixed building, it is rather like a skeleton that consists of indeterminacies and that the reader concretises (***konkretisiert***) in her/his way.

The question why it is nevertheless possible to describe situations and create characters in a text would be answered by reader–response critics in reference back to Husserl's phenomenology. Husserl works with two central terms: on the one hand there is "phenomenological reduction": we cannot know if objects exist independently from ourselves, all we know is how they appear to us and how we perceive and experience them; reality must therefore be treated as a set of phenomena and not as objective. On the other hand there is the "eidetic abstraction"[66]: Our minds are not a "random fluxus of phenomena", we are not simply overwhelmed by impressions without being able to structure and organise them. Every phenomenon is abstracted to a set of general features or types, this set for cat may be "four legs, furry, whiskers" and this set makes it possible to identify the "phenomenon cat" if we see it – and also to remember it. Literary works are based on the same principle. When a house is mentioned, it is not one specific house but the principle of house or house in general. A text presents "schematized views" (*schematisierte Ansichten*) as Wolfgang Iser calls them. It is the job of the reader to take these schematized views a text offers and to concretise them.

There is a general agreement on the notion of a text as a "series of indeterminacies" but

[65] Roman Ingarden, "Konkretisation und Rekonstruktion", in: Warning, Rainer (ed.), *Rezeptionsästhetik: Theorie und Praxis* (München: Fink, 1975), p. 44.

[66] Terry Eagleton, *Literary Theory: An Introduction* (Oxford: Blackwell, 1983), p.55.

different opinions when it comes to such questions as what are the primary factors that shape the reader`s response (why does s/he fill the gaps in this particular way and not in any other?) and where to draw the line between what is objectively given in the text and what is subjectively put in by the individual reader (How far does the text guide the reader? Is there a "correct" way to concretise the text and is misreading possible or is the text a field which is completely open for any interpretation?).[67]

Norman Holland has a psychoanalytical background and in his view the way how textual gaps are filled by individual readers is mostly determined by their personality, fantasies, dreams and private connotations. Every text contains an "unconscious fantasy", aspects of which appeal to the reader. They appeal, but at the same time (through reading, and thereby transforming them into conscious, acceptable meanings) the reader can overcome them. This is of course a very subjective way of regarding the reading process; it makes reading a private experience influenced only by the personal history of the person and places an individual therapeutic function on literature.

But there are also approaches in reader response theory that place literature and the reading process in a wider socio-historical context and regard reading both as a "collective phenomenon", not merely a subjective chain of impressions but guided by a) literary convention as well as b) the reader`s experience of every-day life. Hans Robert Jauss (who, together with Wolfgang Iser, both from the University of Konstanz, refers back in his work to the German hermeneutic tradition and the phenomenological ideas of Husserl and Heidegger) coined the term "horizon of expectation" (*Erwartungshorizont*) to describe the, at least partly socially determined, background of familiar themes, allusions and literary conventions which are evoked by the knowledge of former texts. Any text can either simply reproduce these expectations or it can vary, correct and alter them, whereby in Jauss` view the ideal and most effective work would be the one that first evokes this familiarity with its genre, style or form to destroy it later step by step. This idea of not-fulfilling our expectations, this aspect of "defamiliarization" (a term first used by the Russian formalist Victor Shklovsky) might function as a possible definition of a literary work. Whereas in "ordinary" conversation or

[67] see M.H.Abrams, *A Glossary of Literary Terms, 5th editon (Fort Worth et al: Holt, Rhinehart and Winston, 1988).*

non-literary texts the aim is to stay in the frame of convention and to be as unambiguous as possible, the literary text tends to cross the borders of expectation and alters the rules.[68] But it is not only reflection upon literary conventions and reading habits that a text can trigger. Reading also brings a deeper self-consciousness and forces a more critical view of one's own world view and ultimately own identities. The world evoked in a text is a "Konkurrenz zur bekannten, was nicht ohne Rückwirkungen auf die Bekannte bleiben kann"[69] on a scale that spans from "Zuschlagen des Buches bis zur Bereitschaft einer reflexiven Korrektur der eigenen Einstellung".[70]

The "horizon of expectation" is not static, just as the reading process is not (which would be a contradiction in terms). Reading is a dynamic process; the reader has a certain pre-understanding of the text, which influences the reading, but as the reading process proceeds these expectations are modified by what the reader learns. All new information alters the understanding of what has been read before and the expectation of what is yet to come. Reading therefore is a cumulative process.

It is also a temporal process, which is especially stressed by Michael Riffaterre[71] and Stanley Fish. In his essay "Affective Stylistics" Fish discusses the importance and the consequences of this insight by looking at a "double negation"[72]."Not did they not perceive the evil plight",a line from Milton's *Paradise Lost* is, according to Fish and against logical thinking, NOT the same as "They did perceive the evil plight". In the reading process of this line there is a moment of hesitation that is extremely important and that would disappear if the sentence were to have a less ambiguous form. This moment of hesitation, when the reader is puzzled and undecided, is a part of its meaning, not playful ornament but essential.

[68] Cervantes' *Don Quixote* is a good example of defamiliarization. Written at a time when the most popular genre was the romance of chivalry, it first raises the expectations connected with this genre onlyto parody it – which of course only works because these conventions exist.
Entertaining literature, or 'culinary' literature as Jauss refers to it, in most cases fulfils and confirms our expectations, but those works who do not confirm our reading habits are potential candidates to survive and to forward literary history. (Hans Robert Jauss, "Literary History as a Challenge to Literary Theory", p.13).

[69] Wolfgang Iser, "Die Appellstruktur der Texte", in: Warning, *Rezeptionästhetik*, p.233.

[70] Iser, "Appellstruktur", p.233.

[71] In his response to the well-known structuralist reading of Baudelaire's *Les Chats* , he strongly argues against the static (spatial) analysis of the text that starts after the text has been read as a whole without taking into account the temporality of the initial reading and understanding processes.

[72] Stanley Fish, "Literature in the Reader: Affective Stylistics", *New Literary History*, vol.2, no.1 (Autumn 1970), pp.123-162., p. 125.

There is still the question how objective or subjective the results of the reading process can be and if there is any right or wrong in concretising a text. Roman Ingarden presumes in *Vom Erkennen des Literarischen Kunstwerks* that the literary work is an "organic whole", that the text has indeterminacies and that a reader has to concretise them correctly: "Die Funktion des Lesers besteht darin, sich den vom Werk ausgehenden Direktiven und Suggestionen zu fügen [...]."[73]

That, of course, limits the activity of the reader enormously and puts him back into the passive role of somebody who can only react to given orders. Jauss and Iser are more open-minded, according to them different readers are allowed to fill the gaps in different ways. A reading is neither purely subjective or arbitrary, nor is there only one pre-given correct interpretation, the text

> "gewährt einen Spielraum von Aktualisierungsmöglichkeiten, denn er ist zu verschiedenen Zeiten von unterschiedlichen Lesern immer ein wenig anders verstanden worden."[74]

and an "Auslegungsspielraum" exists to fill the gaps between the different "schematized views". It is a process of balance between certain means and signals an author gives and shared literary convention vs. readers' private inputs.

The text encodes within itself an "implied reader" (*implizierten Leser*) who shares the code and the cultural background of the author to a certain extent. While writing the text the author has one potential audience more than another in mind and as long as there is a certain correspondence of the code implied by the author and the one of the actual reader and as long as the reading of a text is more or less coherent, it is acceptable for Iser.

The problem with this notion is that it is based on the assumption that a literary work can or should be something "coherent" or "an organic whole", which especially does not work with (post)modern (hyper)texts that often enough do not want to have ONE graspable meaning. They tantalise the reader with double-meanings or try to have no

[73] Roman Ingarden, "Konkretisation und Rekonstruktion", in: Warning, *Rezeptionsästhetik*, p. 51.

[74] Iser, "Appellstruktur", p. 230.

meaning at all (to be "texte sur rien") and are often more a "free play of words" than a close, coherent, meaningful text.

Another question combined with the question of subjectivity/objectivity is that if we consider a text as a kind of skeleton that gets "its flesh" only through realisation of the reader, how can I (as a critic and reader) ever get hold of the text itself and of the "pure meaning" of the text? The only access to a text I have is via reading it, and then it is no longer the "text itself" but my own interpretation of it.

Stanley Fish refers to this question in his collection of essays *Is There a Text in this Class?* where he comes to the (of course quite polemical) conclusion that there are only the twenty-five different readings/interpretations of a text in the class and nothing like the "text itself". Of course there is the book, hundreds of pages full of black print, but one should not give way to the temptation to mistake the "material" for the "content". Fish denies any objectivity:

> The objectivity of the text is an illusion, and moreover a dangerous illusion, because it is so physically convincing.[...]A line of print or a page or a book is so obviously THERE [...], that it seems to be the sole repository of whatever value and meaning we associate with it.[75]

The number of possible readings of a text is not limited but infinite, as the number of potential readers of a text is infinite. As a consequence the question: "What does a text MEAN ?" is a question which cannot be answered; there is nothing like a pre-existing meaning in the text, it is entirely in the hands of the reader to decide what s/he wants it to mean. The question to ask is:"What does the text do to us?", with the help of "an analysis of the developing responses of the reader in relations to the words as they succeed one after another in time"[76]. The subject of critical attention must be the reader and his/her reaction and not any "objective structure" that can be found in the text.

Fish also widens the definition of "interpretation". We do not read a poem (=Poem as a given fact), we interpret it as a poem; the line endings are not important points, we interpret them as such; and even the author of a text is no "fact" but our interpretation of

[75] Fish, "Affective Stylistics", p. 140.
[76] Fish, "Affective Stylistics", p.140.

the "concept of an author". Over the years we have acquired a set of "interpretive strategies" that allow us to read a poem as a "poem", "these strategies exist prior to the act of reading and therefore determine the shape of what is read, rather than, as is usually assumed, the other way around".[77]

The fact that different readers will apply the same interpretive strategies to a text, is (in Fish`s view) no argument for the existence of a "meaning in the text" that determines the strategies we use. Certain groups of readers belong to certain "interpretive communities" and therefore share the same strategies. Since readers share certain ideas about and attitudes towards the text (e.g. that a text that rhymes and is printed in lines is a poem) they will deal with the text in a certain way (e.g. regard line endings and rhyming words as important). These interpretive communities and the strategies they use have a temporary stability, but they are also open to change and variation (e.g. confronted with free–verse poetry, the interpretive strategies change because the old ones are no longer appropriate) and allow a certain amount of disagreement on a large basis of agreement. It is this idea of "interpretive communities" that saves Stanley Fish from complete randomness and subjectivity and implies a certain stability.

For these critics, any text requires an active reader, with variations in the degree to which the text invites it. More traditional texts tend to hide the fact that they are constructs and have to be worked on by the reader and try to achieve a smooth, uninterrupted and "natural" read, which they usually achieve by working within the traditions and not against them. Other, more experimental texts, however, attempt a higher degree of reader activity and break conventions to make reading a less smooth and more reflected activity.

The question is how to implement this "active" role of the reader into the literary text and produce a "writerly" text that the reader can co-author. The argument brought forward in discussions of electronic writing acknowledges reader-response theories and its re-evaluation of the process of reading as the site of meaning production and argues

[77] Stanley Fish, "Interpreting the Variorum", in: *Is There a Text in This Class?* (London: Harvard University Press, 1980).

for a close link between them and the practice of hypertext (fiction) writing.

The theories of reader-response critics are appropriated to the interactive reading processes in electronic writing in a similar way as Barthes, Derrida and Deleuze and Guattari are to the fragmentation and indeterminacy of the non-linear structure of a hypertext - namely by arguing that the electronic text can be seen as a literal implementation of the reader's influence stated in the theories. Especially hypertext, with literal gaps (in the form of links between nodes) and an element of choice in the reading order, is seen as a bridge between the role of the reader proposed by theories and the implementation of this role in print text, which is seen as only metaphorical.

> *The interactive reader of the electronic word incarnates the responsive reader of whom we make so much. Electronic readers can do all the things that are claimed for them - or choose not to do them. They can genuflect before the text or spit on its altar, add to a text or subtract from it, rearrange it, revise it, suffuse it with commentary. The boundary between creator and critic (another current vexation) simply vanishes.*[78] *(Richard A. Lanham)*
>
> *Users of literary hypertexts can come to realize their power as reader-writers whose actions appear to determine fundamental characteristics of the story. In such a text, the common distinctions between "writer" and "reader" begin to collapse in a way that has long been theorized for print text but not realized in such visible form.*[79] *(Johndan Johnson-Eilola)*

Both Richard Lanham and Johndan Johnson-Eilola argue the close connection between reader-response criticism and hypertext. Johnson-Eilola emphasises the choice of reading texts in different ways and the resulting liberty to accept or not accept an order, and ultimately a meaning, suggested by the originator of the work; Lanham stresses the possibilities the flexibility of the electronic medium offers not only to choose the reading order but also to add to or revise a test, and suggests that in a hypertext environment the border between reader and author, seemingly unbridgeable in a stable print text can be overcome literally.

These claims need to be examined further, since they can be critiqued from a number of angles. To start with is a 'more than metaphorical' interaction with a text not unique to

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[78] Richard A. Lanham, *The Electronic Word: Democracy, Technology, and the Arts* (Chicago and London: The University of Chicago Press, 1993), p.6.

[79] Johndan Johnson-Eilola, "Reading and Writing in Hypertext: Vertigo and Euphoria", in *Literacy and Computers: The Complications of Teaching and Learning with Technology*, ed. by Cynthia L. Selfe and S. Hilligoss (New York: The Modern Language Association of Amerika, 1994), pp.195-219 (p.195).

electronic texts. Print examples that involve the reader very literally in the construction of the text (the physical text object as well as, through that, the construction of the narrative) exist, and have found critical attention, for example in the work of Umberto Eco, who argues in "The Poetics of the Open Work" for a narrower and more literal interpretation of the term open. Initially he argues that:

> A work of art, therefore, is a complete and closed form in its uniqueness as a balanced organic whole, while at the same time constituting an open product on account of its susceptibility to countless different interpretations which do not impinge on its unadulterable specificity. Hence every reception of a work is both an interpretation and a performance of it, because in every reception the work takes on a fresh perspective for itself. [80]

While he agrees that any work is open to interpretation, a generalising statement like this, while undoubtedly true and important, has only limited use for critical analysis, and he goes on to argue that there are works (of music, art and literature) that are open in "a more tangible sense". These are, he writes,

> quite literally 'unfinished', the author seems to hand them on to the performer more or less like the components of a construction kit. He seems to be unconcerned about the manner of their eventual deployment.[81]

His examples include Mallarmé's unfinished work *Livre* and the circular arrangement of Joyce's *Finnegans Wake*, in which the last sentence is a repetition of the first, suggesting a circularity and the possibility of infinite re-reading and re-interpretation.[82] I would like to add a few other examples that take the idea of the text object that has to be constructed by the reader even further and reflect the openness and indeterminate nature of the reading process on the level on physical construction. B.S. Johnson's loose-leaf box-novel *The Unfortunates* is one example; its sections have to be taken out of their box and shuffled into a random order before the reading can begin. John Barth's *Once Upon a Time* consists of nothing more than a strip of paper, that, after cutting it out and twisting it into a Moebius strip, turns into a circular, infinite text. Raymond Federman's *Take it or Leave it* includes a highly self-referential feedback questionnaire for readers to fill in, cut out and send back. Most remarkable, however, both in its playfulness and in its potential combinations is Raymond Queneau's collection of sonnets *Cent Mille Milliard de*

[80] Umberto Eco, "The Poetics of the Open Work", *Twentieth Century Studies,* no.2 (1974), pp.6-26, p.8.
[81] Eco, "The Poetics of the Open Work", p.8.
[82] Eco, "The Poetics of the Open Work", pp..14 - 16.

Poèmes.

At first glance this text seems to consist of only ten pages with ten sonnets, each printed on a single page. The page is cut into fourteen horizontal strips each containing one sonnet line, allowing readers to create new sonnets by turning each of the strips in a random fashion. The number of sonnets that can be produced this way (all perfect sonnets with the correct metre and rhyme scheme) is very large - 10^{14} - one hundred trillion (the cent mille milliards promised in the title). No reader would ever be able to read all of these sonnets. According to OuLiPo's own calculations "a reader can read for a million years at five minutes per sonnet without reading the same sonnet twice"[83]. This is an open work in Eco's definition that, just like the construction kit Eco uses as a metaphor, contains in its structure vastly more possibilities than can ever be realised by one reader. But of course no reader would ever attempt to read more than a few of the poems, as with most of OuLiPo's work here again the structures and principles are more important than their actual realisations.

Queneau's work, and especially the *Cent Mille Milliards de Poèmes*, are a candidate for computerisation. William Paulson, for example, states in his 1989 article that "obviously the possibilities of the book as format are being strained to the limit, and *Cent Mille Milliards de Poèmes* would be an ideal candidate for a computerized edition."[84] I do, however, agree more with Espen J. Aarseth, who argues that

> the fact that it is a book is just as significant; and if it seems easy to implement as a computer program, that is because of the simple and unstrained elegance of its idea.[85]

Examples of printed text are just as open, even in Eco's sense, as electronic texts exist; the question, however, remains whether it is very helpful for the understanding of interaction and interactive structures to look for 'literal' implementations of the construction kit metaphor. Theories of reading stress the subtlety and complexity of the reading and sense-making process, and, in a similar manner to the oversimplification of intertextuality to a more immediate reference system (as discussed in the previous

[83] O.B.Hardison Jr., *Disappearing Through the Skylight: Culture and Technology in the Twentieth Century* (New York: Viking Penguin, 1989), p.201.

[84] William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History*, v.20 n.2 (Winter 1989), pp.291-304 (p.297).

[85] Espen J.Aarseth, "Non-Linearity and Literary Theory", in: *Hyper/Text/Theory*, ed.by George P. Landow (Baltimore, MA: Johns Hopkins University Press, 1994), pp.51-86 (p.67).

chapter), a too direct application of those theories might undermine and oversimplify the work done in this important area of contemporary literary criticism.

3.4: A New Definition of Interactivity

Neither "interactivity as conversation", "interactivity as performance" nor "interactivity as exploration" or literal interpretations of recent literary theory can fully satisfy the need for a definition of the changing relation between author (text) and reader that a shift to the electronic writing medium entails. It seems that to make interactivity a useful category, the definition of the term has to be redefined away from just a 'buzzword' to describe acts of reader activity in the reading process.

I would like to suggest an approach to interactivity which is not based on the degree of input a reader has on the construction of a text and its textual meaning, be this influence literal or metaphorical, but on the effect this initiative has on the text-object and subsequent readings of it. And here lies the problem with most so called interactive fictions, the interactive games, but even more so with the exploratory hypertext fictions of Joyce, Moulthrop, Jackson and McDaid. Though assigned the potential to obscure or even dissolve the boundary between author and reader, they in fact confirm the notion of a single author with authority over the hand-crafted, original literary work.

Instead of disappearing, the authority and presence of the author can be sensed in every reading of the hypertext fictions when, rather than an empowering experience, their seemingly random complexity results in a frustrating reading experience. This happens precisely because of the associative nature of the writing process, which is accommodated so well in hypertext, but in which, without the organising constraints of the print text, it can be very difficult for readers to successfully recreate the associative act of the author. Instead they are led through the text, not by their own motivated and active choices, but rather following what can seem to be rather random trails constructed at the author's whim. This can not only be read as the failure of the project "interactivity"in many postmodern hypertext fictions, it is this hidden confirmation of the position of the author and his/her authority which is (under the surface of newness) in fact deeply conservative.

This contradiction between theoretical claims and practice has been pointed out by Myron Tuman, who, after an analysis of Joyce's *afternoon* comes to the conclusion that it

> is ironic [...] - albeit hardly surprising - [...] that many of the same hypertext advocates who see the form as leading to the death of the author are also trying to 'author' their own hypertexts and in doing so often treat hypertexts as an extension of the book.[86]

Interactive fiction games and exploratory hypertexts discussed in this chapter (as examples of their genres) offer, in the way they are structured and use their medium, choices between different different links and reading order, but they do not (and here I come back to my initial criticism of the ubiquitous use of the term interactivity) offer the option to create and add new material or links to already existing material. I see it as a vital condition for interactivity beyond what can be achieved in print that there is a chance for the reader to become creative with the material and very literally become an author.

One might argue here that a reader can always become an author by picking up pen and paper and writing an alternative ending to the story that s/he has just read or interact with the text by adding marginal notes. This is undoubtedly true - but the important factor is the impact such an activity has on the actual material, which in the case of alternative endings or marginal notes is none. An alternative ending to *Gone With the Wind* hidden in a drawer or comments in the margin of one copy of a particular text makes no difference to the material. One has to distinguish between private acts of writing (like marginal notes) and public acts (adding material to a text electronically stored and accessible to a large audience on, for example, the internet). The first will (at best) have an influence on one's personal perception of the text. The second influences the text itself and with it the perception of everybody else who accesses it and, in consequence, alters the whole text. Reading a text gives readers ideas and inspiration, which in turn leads them to create something new but related.They add this to the "original text", others read the contribution as part of their "original" text[87] , have ideas, give feedback, change the text, etc.. That again changes the initial contributor's perception of the text, triggers new

[86]Myron C. Tuman, *Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.79. He finds the contradiction "hardly surprising" and argues throughout the whole book that they too are symptoms of a transitional phase in which authors and readers try to break away from the print paradigm while they are at the same time deeply rooted within it.

[87] Without being able to distinguish between the two, there is no difference in status between the texts.

ideas, leads to new contributions - a direct two-way interaction with the text which is quite impossible in print.

3.4.1: Collaboration

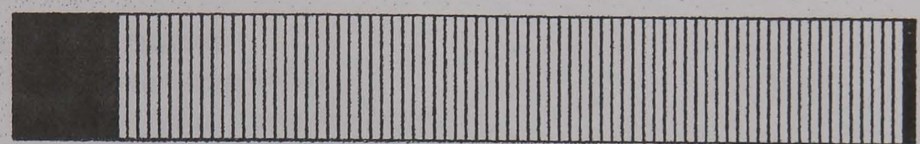
> *Only part of this great change impinges directly upon the literary enterprise. But this overall rescripting of all societal premises is bound to affect reading and writing immensely. The formerly stable system - the axis with writer at one end, editor, publisher and bookseller in the middle, and the reader on the other end - is slowly being bent into a pretzel.*[88] *(Sven Birkerts)*

> *I am not convinced that hypertext is a particularly strong example of how "electronic textuality" challenges traditional concepts such as readers, authors, freedom (of print / publishing). [...] New writing must be radically non-authorative and collaborative. (Espen Aarseth)*

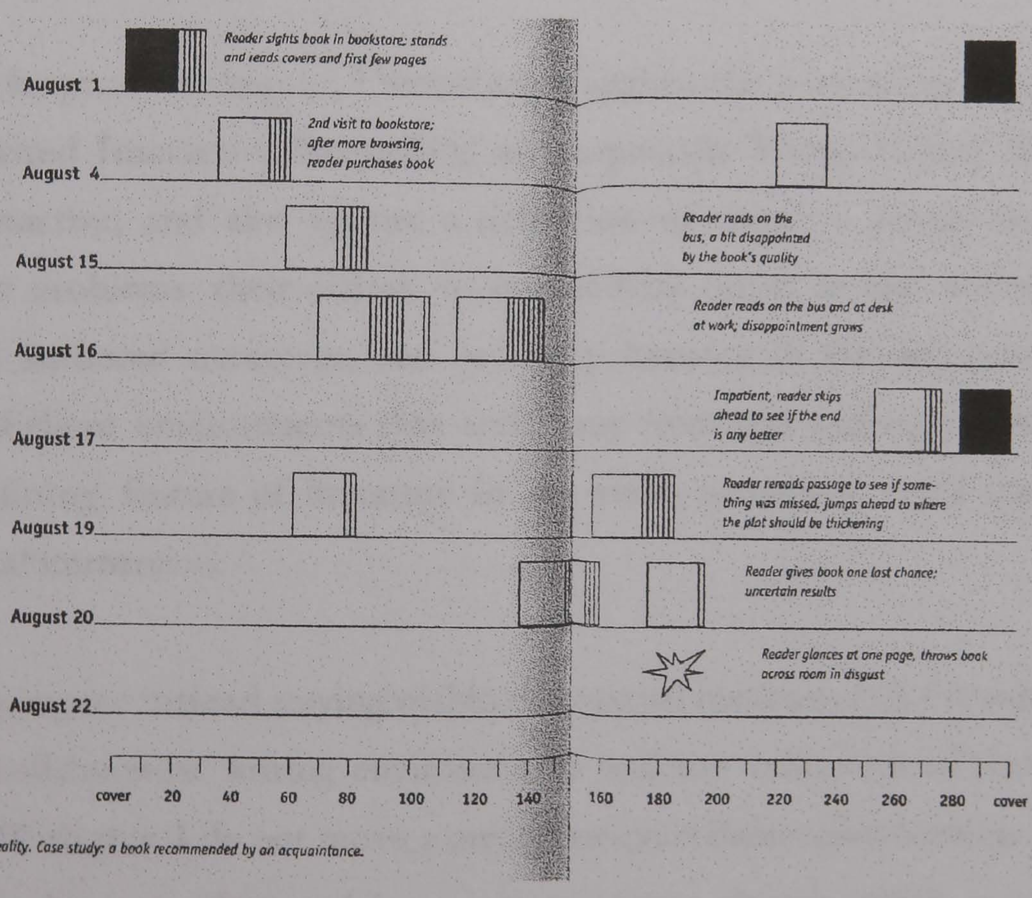
Because of the general flexibility of digital text and especially because of the growing computer internet, the electronic media offer the potential for public acts of writing and this type of collaboration. Print facilitated the physical and temporal distance between the creation of a text and its consumption, electronic texts on computer networks allow a physical separation between the reader and the reading material, which makes possible (global) collaboration. How these facilities have been used for collaborative fiction projects (which are in my opinion the most promising steps towards interactive writing) and if this has bent the author-reader relation, as Birkerts puts it, "into a pretzel" will be, together with a discussion of the "myth of a single author" and collaborative print projects, the topic of the next chapter.

[88] Sven Birkerts, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age* (Boston and London: Faber and Faber, 1994), p.5.

Chapter 4: A New Kind of Author? Collaborative Writing



Use of a book as it is commonly conceived. The reader dutifully trudges the linear track prescribed by the author.



Use of a book in reality. Case study: a book recommended by an acquaintance.

Much of the consideration currently focused on hypertext concerns the notion of an "interactive" text. The most curious aspect of this "new development" is the picture it paints of the earlier, "noninteractive" text.
A work that allows its reader to jump from section to section by choice clearly shares this characteristic with existing paper reference books. In fact [...] books have always been used in this interactive way. [...]
Aren't these works (even allowing for such typical computer adventure game possibilities as picking up and putting down items at the player's discretion) still deeply conservative? Conservative in the sense that the expert / artist conserves approximately 95% control of the final experience. (Robert Wittig)[1]

In a contribution to the hypertext-literature (ht_lit) discussion mailing list, Garreth Rees[2] suggests a list of literary forms arranged in what he perceives to be their increasing degree of interactivity:

Traditional linear narrative
Postmodern non-linear narrative
Tree-fiction (Choose your own Adventure)
Full hypertext narratives
Adventure Games
Simulations
Automated Interactive Storytelling
Virtual Reality Storytelling

As outlined in the previous chapter, I would argue against the proposition that Adventure Games, Automated Interactive Storytelling and especially Virtual Reality "Storytelling" are more interactive, and also against a definition of them as literary forms. Firstly because of the problems their claims to interactivity cause in the context of their preconstructed authored outcomes, and secondly because of the increasingly image-based nature of these environments that shift away from text and its mediated textual distance (a defining feature of literature in my view) towards a visual ideal of more unmediated total immersion.

I would like to propose instead staying within the textual medium, and focusing attention on a study of collaborative writing environments and the outcomes of these authorial collaborations. With this, I do not mean a metaphorical collaboration between author and reader, such as the one advocated by reader-response theory critics, a collaboration which can be found in any text, albeit with varying degrees of intentional encouragement by the author; nor a continuation of the study into interactivity which has so far focused

[1] Rob Wittig, *Invisible Rendezvous: Connection and Collaboration on the New Landscape of Electronic Writing* (Hanover, NH: Wesleyan University Press/University Press of New England, 1994), p.113.
[2] Garreth Ree, positing to ht_literature list entitled "Degrees of Interactivity" (23.9.1996).

mainly on the textual choices of multiple path fiction or exploration of postmodern hypertexts, both of which are discussed above. Rather, I would propose a literal definition of collaboration as works of multiple authors and multiple authorial voices and argue for a shift in emphasis from 'explorative' to 'constructive' hypertext fiction as well as to collaborative projects in print.

4.1: Explorative vs. Constructive Hypertexts

Michael Joyce proposed a distinction between 'exploratory' and 'constructive' hypertext in an early essay, "Siren Shapes"[3], of 1988. Exploratory hypertexts, he argues, are hypertexts of the familiar type, including Joyce's own works of hypertext fiction, which

> encourage and enable an audience (users or readers are inadequate terms here) to control the transformation of a body of information to meet its needs and interests. [...] An exploratory hypertext should enable its audience members to view and test alternative organizational structures of their own.[4]

Here we find the familiar argument of choice and exploration equalling interactivity and empowerment, which, though very attractive on the theoretical level, is not always an equation that works in practice. It also suggests again the opposition of the exploratory hypertext and the 'other' (i.e. print) text which cannot be explored and controlled by the reader. An opposition which, as I am trying to argue throughout this thesis, is based on false assumptions and represents a premise widely used in hypertext theory which cannot be held up to close scrutiny. Both on the theoretical level (see the discussion of reading theories in the previous chapter) and on a practical level (see graph above), control and influence of the reader are always present in any reading and cannot be used feasibly for a distinctive definition of interactivity.

The second category Joyce proposes is that of the 'constructive' hypertext, about the precise nature of which Joyce himself seems to be slightly unsure:

> Just as exploratory hypertexts are designed for audiences, constructive hypertexts are designed for what Jane Yellowlees Douglas has termed "scriptor[s]". Scriptors use constructive hypertexts to develop a body of information which they map according to their needs, their interests, and the transformations they discover as they invent, gather, and act upon that information. [...] Constructive hypertexts require the capability to act: to create, to change, and to recover particular encounters within the

[3] Michael Joyce, "Siren Shapes: Exploratory and Constructive Hypertexts", *Academic Computing,* no.3 (November 1988), 10-14, 37-42.

[4] Joyce, "Siren Shapes", p.11.

developing body of knowledge.[5]

The flaw in his argument lies in the different premises on which his definitions of the two categories of exploratory and constructive hypertext are based. Exploratory hypertexts are <u>products</u> and are defined by the activities of their readers (or their audience), while constructive hypertexts are looked at from the perspective of the author (or scriptor) and are seen as a tool for organising material, a "tool for inventing, discovering, and testing multiple, alternative, organizational structures"[6]. Exploratory hypertexts are 'finished' objects of consumption, constructive hypertexts tools for creation and a creation process and instead of different types of hypertexts, the two forms do appear rather as two aspects of the same process: the process of construction/authoring in a hypertext system (constructive hypertext) and the subsequent consumption / reading of the result (exploratory hypertext).

Joyce does, however, make use of the term 'constructive' hypertext to describe not only individual instances of hypertext creation, but to describe the <u>system</u>[7] which enables "audiences of experts as well as novice readers alike to act as 'scriptors'."[8] And it is in this perception, the view of the hypertext system as an authoring tool and as an enabler for collaboration and collaborative construction of text, rather than as the individual hypertext, where Joyce's terminology becomes useful and where I will start my investigations.

(Collaborative) constructing / authoring of literary texts will be the focus of this chapter, both in electronic form and in print. Different forms and degrees of collaboration can be identified. Firstly, the 'single author' text, which still displays a great amount of inevitable or planned collaboration from many sides, and which raises question of the (non-) existence of the single authorial voice and the (im-)possibility of the solitary genius, especially in the context of the intertextuality debate. Secondly, we can find collaborations of a small, limited group of named authors on a project, often under strict

[5] Joyce, "Siren Shapes", p.11.
[6] Joyce, "Siren Shapes", p.12.
[7] One of which, Storyspace, Joyce himself was involved in creating, and another one, the WWW is frequently used for collaborations.
[8] Joyce, "Siren Shapes", p.13.

rules and guidelines but also anonymous / large scale collaborations. Examples of both types can be found both in digital and print form, and some of these will be used as illustrations and case studies in the following chapter. Special emphasis will be given to the examination of the new forms of collaboration the new medium can offer[9] and the changes and possibilities in the nature of authoring these changes entail.

4.2: Singular Authors - Singular Voices?

Before looking at concrete examples of constructive, collaborative forms of writing and literature, it is necessary to take a theoretical look at the notion of authorship, a concept which appears simple on the surface and has come to mean the single authorial creative voice in a text directly linked to the figure of the 'real' author behind it. This concept, however, is neither natural nor fixed, but has to be seen as a historical construction that emerged in the 15th century and that has come under increasing scrutiny and deconstruction in the second half of the 20th century.

The 1960s especially saw, with the emergence of deconstruction, a radical rethinking of the concept of the author. Roland Barthes attempts in his famous polemical essay "The Death of the Author" to shift the interest of literary theory away from the author towards the reading process and affirms that "the birth of the reader must be at the cost of the death of the author"[10]. In an reaction to Barthes, Michel Foucault writes "What is an Author?" in the same year and reduces "author" to a concept, a function, an "operation of certain discourses"[11], a creation of the late 18th /early 19th century "when a system of

[9]George Landow defines four forms of collaboration. In the first the collaborators are "continually conferring as they pursue a project in the same place at the same time". In the second, which he calls 'versioning', one collaborator produces a draft which the second later edits / modifies. In the third, the "assembly line model", work is shared out and different parts are worked on by different collaborators. The forth model - which Landow sees as unique to collaboration in networked hypertext systems - is a combination of all the other three: "By emphasising the presence of other texts and their cooperative interaction, networked hypertext makes all additions to a system simultaneously a matter of versioning and assembly line model. Once ensconced within a network of electronic links, a document no longer exists by itself [... F]irst, any document placed on any networked system that supports electronically linked materials potentially exists in collaboration with any and all other documents on that system; second, any document electronically linked to any other document collaborates with it." (see a discussion of intertextuality as collaboration later in this chapter). George P. Landow, *Hypertext: The Convergence of Contemporary Critical Theory and Technology* (Baltimore and London: Johns Hopkins University Press, 1991), p.88-89.

[10] Roland Barthes, "The Death of the Author", in: *Image, Music, Text*, selected and translated by Stephen Heath (London: Fontana Press, 1977).

[11] Michel Foucault,"What is an Author?", in: *Authorship: From Plato the Postmodern. A Reader*, ed. Sean Burke (Edinburgh: Edinburgh University Press, 1995), pp. 233-246 (p.235).

ownership and strict copyright rules were established"[12], which is neither universal nor constant and which is often both an abstract and a complex construction (as in cases such as Homer or Shakespeare) rather than one "formed spontaneously through the simple attribution of a discourse to an individual"[13].

4.2.1: What is an author?[14]

The term author has a long history, as Donald E. Pease points out in his short genealogy of the term in an essay entitled simply "Author"[15], a history in which it has always been associated in some way or another with authority and the individual author as the source of this authority. The term is derived from the mediaeval 'auctor', which "denotes a writer whose words command respect and belief"[16] and who often established the rules and principles of a discipline. Auctors, importantly, were regarded as having an authority based on divine revelation, unlike the scribes and copyists who would copy, re-write or comment on the 'original' writings of the auctors - an act perceived as a skilful craft rather than a creative art.

Only in the late 15th century with the advent of the Renaissance with its new discoveries and its mistrust in religious doctrines and consequently a greater belief in scientific and rational explanations as well as in the ability of mankind to both understand and shape their surroundings, did authors lose their divine connections and base their authority on their knowledge instead. Or, as Penelope Murray argues, the Renaissance poet (=author) became viewed not as the communicator of divine interventions but as a creator in his/her own right: "[A]s God creates the world out of nothing, so the poet like another god, invents his material, making images of things that do not exist."[17]

[12] Foucault, "What is an Author", in: *Authorship*, p.236.

[13] Foucault, "What is an Author", in: *Authorship*, p.237.

[14] A question that is not only the title of Foucault's essay, but also of a collection of essays tackling the same issue: Maurice Biriotti and Nicola Miller (eds.), *What is an Author?* (Manchester and New York: Manchester University Press, 1993). A comprehensive selection of readings on the topic is collected in: Seán Burke (ed.), *Authorship: From Plato the Postmodern. A Reader* (Edinburgh: Edinburgh University Pres 1995). Other texts will be mentioned on the following pages.

[15] Donald E. Pease "Author", in: *Authorship: From Plato the Postmodern. A Reader*, ed.by Sean Burke (Edinburgh: Edinburgh University Press, 1995), pp. 247-262.

[16] Pease, "Author", p.266.

[17] Penelope Murray (ed.), *Genius: The History of an Idea* (Oxford: Basil Blackwell, 1989), p.4.

From the 15th to the 20th century (in which the concept has come under criticism in literary theory) this definition of authorship and creativity has remained relatively stable and the term author has, as Pease points out, "enjoyed a more or less constant rise in social prestige".[18]

The idea of the author as original creator opens up a large number of questions: if no longer a minority selected to communicate divine inspirations, can everybody be an author? How can we judge the 'quality' or even 'truth' of the work? Can we establish such elusive concepts such as 'talent' and does it supplement or contradict notions of skill and technique? What does 'original' mean and can it mean at all? It is here that the notion of the genius[19] comes in, a notion which stands in close connection, while simultaneously in contradiction, to the Renaissance idea of the author.

4.2.2: The notion of the genius

> *The Romantic artist is another example of the category of genius as martyr. That artist is a man, set apart from society, who properly belongs to the transcendental order*[20]*. (Robert Currie)*

The notion of the genius is predominantly an 18th century concept, especially linked with Romanticism. Unlike the Renaissance author, who is closely connected to his/her surroundings and tries to explore and advance his/her culture and the understanding of this culture from within, the genius is somehow detached, "different from the rest of culture"[21] . This detachment, however, is both inevitable and necessary for the genius to fulfil his/her task, which lies in the development of universal and unifying ideas and works of transcendental beauty that can help overcome the sense of alienation from which the Romantics felt mankind was suffering.

Currie defines this alienation in a spiritual sense, as man "alienated, not from God, but

[18] Pease, "Author", p.266.

[19] For in-depth studies of the history of the term and especially its Romantic use, see the above mentioned collection edited and introduced by Penelope Murray, but also M.H.Abrams, *The Mirror and the Lamp : Romantic Theory and the Critical Tradition* (Oxford: Oxford University Press, 1953) - especially chapters VII and VIII - and Robert Currie, *Genius: An Ideology in Literature* (New York: Schocken Books, 1974).

[20] Robert Currie, *Genius: An Ideology in Literature* (New York: Schocken Books, 1974), p.50.

[21] Pease, "Author", p.266.

from nature, or from history, which came to take God's place"[22] But, of course, it can also be read in a political context of increasing industrialisation, which is how Pease prefers to read it:

> The use of the genius provides a politically useful contrast to other forms of labor in an industrial culture. In producing own work out of material in his own imagination, the genius performed 'cultural' as opposed to 'industrial' labor.[23]

This is an ideal of non-alienated labour, of the genius, by definition few, creating works of art that can help overcome a general feeling of alienation from the creative processes of the many. It is also an ideal of cultural privilege, of (high) art separated and untouched from everyday practices, rather than connected to or coming out of them, of exclusivity and avant-garde and of a separation between art and life.

The 'author as genius', with authority over his/her work and power to create original work, can, however, not only be read as an opposition and a way of overcoming the sense of alienation and alienated labour of the late 18th century industrialisation, but can also be looked at (and has been by both Roland Barthes and Pierre Macherey) as an integral element of "capitalist ideology, which has attached greatest importance to the figure of the author".[24] In a capitalist system, art becomes commodified and consequently, Pierre Macherey argues in his essay "Creation and Production", man is "excluded by nature from originality and innovation"[25] and becomes an alienated figure who, even as an artist, produces within the constraints of the economic system rather than creates despite of it, and the creative author becomes an impossibility and myth.

While the creative, original author, the genius, is not possible in an industrialised and commercialised system, the concept also loses its viability as the publishing industry

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[22] Currie, *Genius*, p.28. He sees this as a development from the alienation felt after the Reformation, when the absence of certainty provided before by the "tradition, ritual and organisation" (p.20) of the church made man feel both weak and insecure. Romanticism he sees as the "first great phase of secular culture"(p.11). Romantic man had overcome the Reformation insecurity and instead of a yearning for God felt a desire for a connection with nature and history.

[23] Pease, "Author", p.267.

[24] Barthes, "The Death of the Author", p.143.

[25] Pierre Macherey, "Creation and Production", in: *A Theory of Literary Production*, transl.by Geoffrey Wall (London, Henley and Boston: Routledge and Kegan Paul, 1978), pp.66-68 (p.66).

develops in the 19th century from 'cottage'[26] into commercial industry with a more complex and complicated production and distribution process and consequently a greater need for streamlining and controlling as well as <u>collaboration</u>. Jack Stillinger argues:

> [I]t was with the rise of the novel in the 19th century, intimately connected with the development and growth of a mass readership - itself the product of accelerated growth in population, widespread educational reform, the increase of literacy, the institution of commercial and public lending libraries, and a host of technological improvements in printing and publishing - that literature for the first time became big business. Just as one would expect, commercial considerations more overtly began mixing with the artistic, and, as publishers turned an eye towards consumer response and sales figures, collaboration became a frequent practice in authorship[27] .

4.2.3: Fiction Factories

Liste 1	
2 blind	8 kräftig
3 arm	9 sympathisch
4 dünn	10 neugierig
5 höflich	11 still
6 konservativ	12 krank
7 zuverlässig	

Liste 2	
2 Lehrling	8 Verbrecher
3 Fußgänger	9 Geschäftsfrau
4 Lehrerin	10 Briefträger
5 Autofahrer	11 Ausländer
6 Zahnarzt	12 Hausfrau
7 Feuerwehrmann	

Liste 3	
2 Brille	8 Beziehungen
3 Erkältung	9 Charakter
4 Fahrrad	10 Hut
5 Bart	11 Führerschein
6 Bauch	12 Diplom
7 Zahnschmerzen	

Liste 4	
2 Parkplatz	8 Gras
3 Garderobe	9 Mauer
4 Lift	10 Einwohner-meldeamt
5 Hafen	
6 Campingplatz	11 Toilette
7 Ausländeramt	12 Küste

Liste 5	
2 Tasche	8 Handschuh
3 Geldschein	9 Taschentuch
4 Einschreiben	10 Ring
5 Hammer	11 Knopf
6 Markstück	12 Nachricht
7 Schachtel	

Liste 6	
2 bekommen	8 aufheben
3 gewinnen	9 kriegen
4 verlieren	10 mitnehmen
5 finden	11 verkaufen
6 suchen	12 vergessen
7 stehlen	

Liste 7	
2 Nebel	7 Gewitter
3 Fest	8 Abendessen
4 Konferenz	9 Versammlung
5 Öffentlich-keit	10 Rückkehr
	11 Wirtschaft
6 unterwegs	12 nachher

Liste 8	
2 Partner	8 Bundeskanzler
3 Zeuge	9 Geschäftsmann
4 Bürgermeister	10 Besitzer
5 Vermieter	11 Chef
6 Mitarbeiter	12 Politiker
7 Pferd	

Liste 9	
2 schlagen	8 töten
3 überraschen	9 verletzen
4 begrüßen	10 mißverstehen
5 treffen	11 kennenlernen
6 beleidigen	12 erschießen
7 beobachten	

Although an accepted and often desired feature of factual writing, collaboration on literary texts is frequently regarded with suspicion. It is, however, not uncommon practice especially for certain types of genre fiction which need to be produced quickly, in great quantity and to a similar standard. The above "Recipe for success for young authors"[28] is a language learning exercise that is intended to encourage advanced learners to construct a fictional story from words chosen randomly from different categories. It could either be

[26] a 'cottage' industry in that authors commission bookseller/printers directly to produce a small print run of a title, often partly funded by a benevolent sponsor. For a brief history of the development of the publishing industry in Britain see: John Feather, *A History of British Publishing* (London, Sydney, New York: Croom Helm, 1988).

[27] Jack Stillinger, *Multiple Authorship and the Myth of Solitary Genius* (New York and Oxford: Oxford University Press, 1991), p.139/140.

[28] *Themen 3* (München: Max Hueber, 1987). p. 93.

considered as a cynical comment on and oversimplification of the writing process, but also as containing a core of truth about the formulaic nature of (certain genres of) fiction, as well as being the underlying principle of study in many formalist / structuralist / narratologist analyses of literature.

In their study *Books: The Culture and Commerce of Publishing*, Coser, Kadushin and Powell devote a whole chapter to what they call "Books without Authors". While not surprisingly most of the titles produced following a certain construction formula are non-fictional titles (such as course books, TV tie-ins, cookbooks etc.), or rather

> products [..] not spontaneously created by individual authors but manufactured, according to formulas, by stables of underpaid writers, who are most often female and taught that individual touches spoil the outcome [29],

there are also examples of 'fiction factories'. Romance novel publishers, for example, produce detailed guidelines on how to construct characters, plot and settings to streamline and guarantee the homogeneity of their different series. But most notable here is the example of Book Creations Inc., a company founded in 1973 by Lyle Kenyon Engel in the United States, which produced the astonishing number of 5000 paperback titles in just over 15 years. Jack Stillinger quotes Engel's *New York Times* obituary, which summarises well the workings of his production, reminiscent of assembly-lines and - while certainly an extreme example - a far cry from the ideal of the author as a free and creative mind, it helps confirming Macherey's argument that authors in the commercialised publishing world cannot be creative genii, but only ever producers of products over which they have little control.

> Engel originated ideas for series of books, usually about a family or community through many generations, prepared a detailed outline, hired writers [who gave up 50% of their royalties to Engel][30] to flesh out the characters and plot, then sold publication rights to paperback houses.[31]

Most of Engel's publications have one named author (John Jakes probably the best known amongst them), but they are written tailored consciously or subconsciously towards an expected market and within the constraints of the framework of the book

[29] Lewis A. Coser, Charles Kadushin and Walter W. Powell, *Books: The Culture and Commerce Publishing* (New York: Basic Books, 1982), p.262.

[30] Coser, Kadushin and Powell, *Books: The Culture and Commerce of Publishing*, p.263.

[31] Stillinger, *Multiple Authorship*, p. 140.

and the series; factors which undermine, if not erode completely, authors' individuality and creativity as well as their 'authority' over their work.

The construction-kit type writing is, however, also reminiscent of many of the collaborative add-on stories discussed later in this chapter as well as the mechanistic approach to authorship by such groups as OuLiPo or the "automatic writing" of the Surrealists, and is used by all of these groups not in a framework of commodification, but against it with the aim of demystifying writing and subverting especially the idea of the selected, creative literary genius, which will be discussed further in the next chapter.

4.2.4: The Myth of the Solitary Genius

The notion of the author has come under attack from various positions. One can find a deconstruction of the term on a theoretical level, mirrored by the experimental play with author-figures/authority and collaboration in, amongst others, writings by the groups mentioned above and other postmodern forms of writing, but there are also a number of critical studies which approach the notion of singular authorship on a more practical level by studying actual collaborations in the writing and publishing processes.

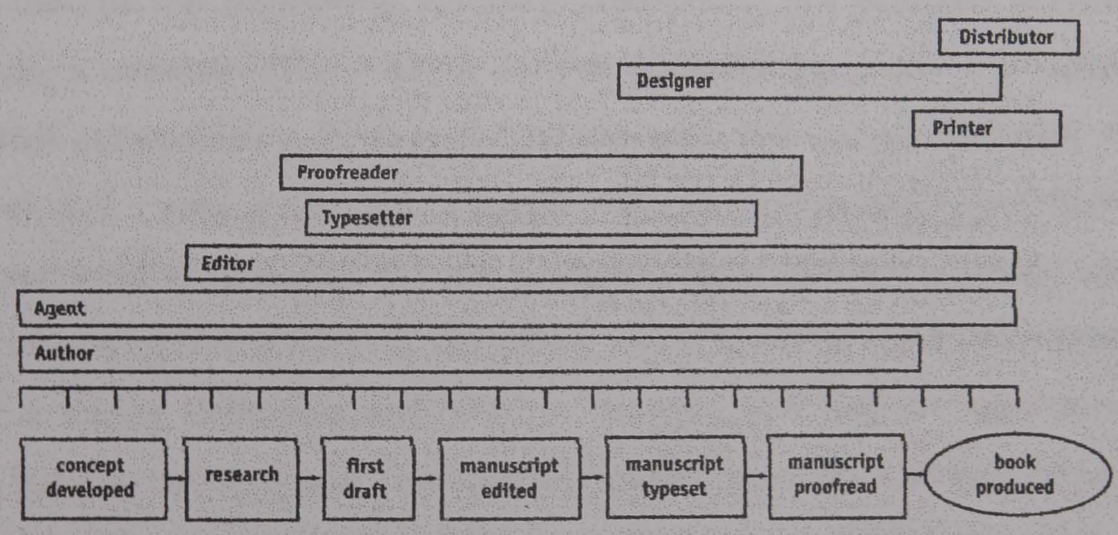
In his study *Multiple Authorships and the Myth of the Solitary Genius*, Jack Stillinger sets out to dispel the myth of a "unified mind, personality or consciousness in or behind a text" and wants to replace the, what he regards as Romantic, myth of solitary authorship with "a more realistic account of the ways in which literature is created"[32]. In his collection of essays, he examines a range of unusual and unexpected collaborations: the manner in which Keats's poetry was revised and polished by his friends and editors, how Coleridge used German philosophical sources without any reference to them to construct his own philosophy, how Pound's influence and revisions considerably shaped Eliot's *Waste Land,* and how John Stuart Mill's wife tried to edit his autobiography to create a less self-critical and more likable image of the author. Stillinger not only looks at literature, even though most of his examples are taken from that realm, but also at playwrights and screenwriters, where collaboration in the production/staging process in theatres and cinemas is inevitably a collaboration of many voices. Though it could be argued that his

[32] Stillinger, *Multiple Authorship,* p.183.

examples are exceptional and that, despite the collaboration and influences, the strong and creative voice of the 'main' author (Keats, Eliot, Mill) still by far dominates that of their collaborators, his study serves well the purpose of undermining the idea of a singular voice in the text and also places literature in a greater social context.

"Literary production is not an autonomous and self-reflexive activity; it is a social and institutional event." argues Jerome McGann in *A Critique of Textual Criticism*[33] and it is this "socialised concept of authorship and textual authority" that Stillinger also argues for and that ties in both with the post-structuralist critique of the notion of the fixed author in Barthes and Foucault as well as with attempts to place literature in a greater socio-historical context of its production and consumption. It is a concept also advocated by Coser, Kadushin and Powell, who include not only friends and editors, but also publishers, printers, agents and booksellers into the social context of the text production.

> *The relations between creators of ideas and their publics are typically mediated through a variety of social processes.(Coser, Cadushin and Powell)*[34]



Pattern of collaboration in a text commonly supposed to be a "single author" text.

"Pattern of Collaboration in a text commonly supposed to be a 'single author' text" [35]

[33] Jerome McGann, *A Critique of Modern Textual Criticism*, p.122.

[34] Coser, Kadushin and Powell,*Books*, p.4.

[35] Wittig, *Invisible Rendezvous*, p.134. This diagram illustrates the complex collaboration behind any book production and is intended to question the concept of the single author with sole responsibility for his/her work.

In their study, subtitled "The Culture and Commerce of Publishing", the authors examine internal processes and organisations of the publishing industry and its editing, production and distribution channels. In a rather idealistic manner, books are described as "carriers and disseminators of ideas" and the role publishers are given is that of "gatekeeper of ideas"[36], the publisher is described as a figure who controls the "floodgates", sifts "the chaff from the wheat", makes "authoritative decisions about which [ideas] deserve sponsorship for distribution and which are to be kept out of circulation"[37] .

A view like this, which the authors themselves admit to be "sublime thoughts" (p.362), reflects a belief in quality control and that 'bad' writing needs to be separated by an informed and authoritative gatekeeper, i.e. the publishing industry, from the 'good and worthwhile' writing before it reaches the - by implication uninformed and unauthoritative - reading public, which is denied the opportunity and capability of deciding themselves what it and what is not worth reading.

The motivation of the publishing industry, however, is not only the dissemination of ideas, it is also a commercial enterprise. Literary publishing presents a peculiar mixture[38], if not internal contradiction, of commercial pressure and the preservation of the high culture ideal and sees a constant struggle between commercial constraints and the industry's own ideal of books as carriers of high culture; and consequently the selection process of manuscripts and ideas is not always solely informed by literary 'quality' (which is in itself a highly debatable and elusive concept and tied in with debates about aesthetics) but also by aspects of commercial viability. This does, in fact, often mean that not the 'bad' books, but rather the difficult, different and challenging texts do not get seen through into print, texts for which the expense of publishing can not be justified in the view of the balance sheet of the publisher.

All book production, due to the complex and costly production and distribution

[36] Coser, Kadushin and Powell,*Books*, p.362.

[37] Coser, Kadushin and Powell,*Books*, all page 4.

[38] A mixture which is reflected in the actual production processes, which mix individual (and old-fashioned) crafts such as illustrating and typography with high technology, mass production and large print runs.

processes, is always a collaboration of many people, as illustrated above. This collaboration undermines traditional concepts of the author as the person solely responsibly for his/her text, and contributes to an increasing separation of authors from his/her text. The publishing industry is also subject of the conflicting interests between cultural ideals and the commercial, leading to an increasing filter process of editing, changing and selecting that any work gets subjected to (adding to the number of voices in a text).

Both these aspects can be significantly changed through developments in electronic writing, which facilitate access to publishing equipment on desktop computers before only available to professionals and to alternative distribution mechanisms. Computers can help authors to become more directly involved in the production and editing of their texts, and also cut out many of the filtering elements of book production; and a number of new electronic publishing ventures have sprung up on the internet[39] to exploit these features accordingly. Though they often reject notions of originality as neither appropriate nor possible in an age of general interconnectivity, initiators of on-line sites interpret the collaboration involved in traditional printing not as a creative advantage, but rather as a negative, selective and elitist filter process, which they feel can be avoided by using digital networks.

These projects underlies the spirit of pop-culture, in that they perceive selection on other points than quality as undemocratic and also advocate an "everybody can and should be an author" credo reminiscent of the pop-artists.

4.3: Filtering out bad writing? Alternative Publishing on the Internet

> *The Net, once the affordability for all threshold is crossed, is the biggest *inclusionary* mechanism in my lifetime. Think about it: How many people publish, compared with how many read? On the net, the percentage of publishers is *much* higher. Not 100%, surely, but far far higher than with print technology. We're dealing with the best technologies ever invented for *combating**

[39]see, for example: *Aspiring Authors Homepage* (http://www.geocities.com/Athens/Acropolis/1773); *Literature for the Unpublished: An Intellectual Dumping Ground* (http://pubpages.unh.edu/~mpc1/Stories.html) and *The UnPublished Author* (http://www.unpub.com) - submitted works are published for free. "There is only one prerequisite: show your rejection letters from previous publishing attempts".

exclusion. All they have to be is cheap. Which is happening in front of our eyes. (Jim Rosenberg)[40]

Probably the most prominent, though not unproblematic, example of an on-line publishing venture is the *Alternative X*[41] web site, which has, since it was initiated in 1994 by Mark Amerika in Boulder, Colorado, developed from humble and experimental beginnings into one of the biggest and most professional electronic publishing projects.

There can be no doubt that alternative approaches to publishing have had their place alongside established publishing houses: fanzines, photocopied pamphlets, micro- and minipresses and other small enterprises have for a long time been a feature of the literary scene and have been invaluable as voices of more alternative, avant-garde writing[42]. These projects, however, can be easily distinguished, and are consequently disadvantaged, in two aspects from their more professional counterparts: There is a lack of visible perfection (until recently laser printing and DTP was expensive and not available to smaller presses) as well as of widespread distribution mechanisms; publicity and distribution takes place only through alternative channels and small print runs, resulting in small audiences.

Alternative X comes out of, and still is[43], part of, this tradition, which Mark Amerika acknowledges, but also gives as one of the reasons that made web-publishing tempting for him:

> What's different, what makes this new media phenomenon very exciting and worth our investigation for the time being, is how the evolving discourse networks located in cyberspace radically change the idea of distribution. Let me give you a first-hand example: those of us who put together the print-based Black Ice literary journal can slave over its annual publication for ten to twelve months and then, because we have "good" distribution, get approximately 1000-1500 copies into the hands of dedicated readers. Production costs per unit are high because of the small number of copies we can afford to print. Whereas over our ten-year history we have cultivated a loyal community of readers, it's very difficult for those readers (and the writers whose work they read) to interact with each other the way a community of like-minded individuals might otherwise like to. It's a wonder that these kinds of alternative lit audiences are

[40] Jim Rosenberg in a contribution to the ht_lit list on 21st March 1995 (Subject: "Re: Globe article / ht elitism"). The posting was part of an ongoing elitism debate.

[41] http://www.altx.com

[42] For an overview over the current small press scene see: *Small Press Guide: A Detailed Guide to Poetry and Small Press Magazines* (London: Writers' Bookshop, 1997).

[43] Mark Amerika and other authors present on the web-site are also involved with Fiction Collective II/Black Ice Books. Which, in turn, takes up the work of Fiction Collective I, which published some of the most influential postmodern American writers such as Ronald Sukenick, Raymond Federman and Steve Katz in the 1960s and 70s. The first two, Sukenick and Federman are still linked and had works published by FCII/Black Ice, have been quoted by Amerika as one of his influences and both had work published on the *Alternative X* website - both original electronic text and works converted from print into digital form.

able to survive at all in today's digitized pop culture.[44]

There are interesting elements in this quote which I wish to explore further to shed light on the sometimes contradictory nature of publishing ventures such as *Alternative X* and their, in my eyes ambiguous, attitude to notions of author and of collaboration. The first point worth looking at is the way in which Amerika positions his work in the context of both avant-garde and pop culture.

4.3.1: Avant-Garde

> *Only a small minority can ever be avant-garde; for once the majority has caught up to something new, whether as creators or as an audience, what is genuinely avant-garde will, by definition, be someplace else.*[45] *(Richard Kostelanetz)*

The traditional view of avant-garde defines it as a small group of individuals who defy mainstream and position themselves in deliberate opposition to contemporary aesthetics to shock, disrupt, defamiliarise. That they are only understood and appreciated by a small audience is not so much a disadvantage but seen as an inevitable necessity, if not a condition for 'avant-gardness'. But, as Kostelanetz points out, the counter cultures of artistic avant-garde are gradually absorbed into the mainstream and defused in the process.

It could be argued that the traditional concept of the avant-garde becomes impossible in an age of mass-media and needs to be revised in the light of global connectivity and widespread exposure[46] to a large audience not only via TV and radio but especially the internet, where the process of 'catching up' happens much faster than before and creative niches in which to hide no longer exist. This presents an ironic contradiction: the nature of the internet provides a forum for sub-/countercultures that would otherwise be marginalised in more traditional formats, but through this wide exposure run the risk

[44] Mark Amerika, "Notes From the Digital Overground", *ebr - Electronic Book Review*, n.2, (electronic journal) at: `http://www.altx.com/ebr/amerik.htm` (30/5/1996)

[45] Richard Kostelanetz, *Dictionary of the Avant-Gardes* (Chicago: a capella books / Chicago Review Press, 1993), p.xiii.

[46] Stuart Moulthrop talks about a similar point in his essay "Toward a Paradigm for Reading Hypertexts: Making Nothing Happen in Hypertext Fiction" (in: *Hypertext / Hypermedia Handbook* ed.by Emily Berk and Joseph Devlin (New York: Intertext Publications / MacGraw Hill, 1991), pp.65-78) where he argues for the impossibility of an avant-garde under postmodernism and the hyperreal: "Modernists could renounce traditional culture by embracing absurdity. Postmodern culture is *always already* meaningless. [...] It is impossible to be Dada in a Dada universe." (p.67) A similar argument applies to the over-exposure of new artists/writers through instant wide exposure on the net.

of losing their avant-garde friction very quickly.

This is a risk Amerika is well aware of himself as he describes in his essay, aptly named "Notes from the Digital Overground"[47]. His solution is to redefine literary avant-garde and combine it with ideas of mass-media and popular culture into a new format called avant-pop.

4.3.2: Avant-Pop

> *Avant-Pop combines Pop Art's focus on consumer goods and mass media with the avant-garde's spirit of subversion and emphasis on radical formal innovation.*[48] *(Larry McCaffery)*

> *Avant-Pop artists have had to resist the avant-garde sensibility that stubbornly denies the existence of a popular media culture and its dominant influence over the way we use our imaginations to process experience. At the same time, A&P artists have had to work hard not to become so enamoured by the false consciousness of the mass media itself that they lose sight of their creative directives, the single most important one of which is to enter the mainstream culture as a parasite would, sucking out all the bad blood that lies between the mainstream and the margin.*[49] *(Mark Amerika)*

Avant-Pop is a term coined[50] by Larry McCaffery, a professor at San Diego State University, to describe a new artistic trend in literature, but also in music, art, video and multimedia by a generation of artists/writers who are as familiar with (postmodern) avant-garde strategies as with popular culture and do not see the two as contradictive. Though placing themselves into a postmodern literary tradition (the lineage includes Pynchon, Vonnegut, Federman, Barthelme, Sukenick, Katz etc.[51]) the 'avant-popsters' also distance themselves from the postmodern project, because they feel that it is too exclusively bookish, that "something is missing from much of the postmodern work of the 60s and 70s, something that didn't quite click with our tele-visual, compu-corder, audio-digitized

[47] Mark Amerika, "Notes From the Digital Overground", *ebr - Electronic Book Review*, n.2, (electronic journal) at: `http://www.altx.com/ebr/amerik.htm` (30/5/1996).

[48] Larry McCaffery, "Still Life after Yesterday's Crash", in: *After Yesterday's Crash: The Avant-Pop Anthology*, ed.by Larry McCaffery (New York: Penguin, 1995), p.xvii-xviii.

[49] "The A&P Manifesto (REMIX), in: *In Memoriam to Post-Modernism* (no page numbers).

[50] Or rather appropriated from the title of a 1984 Lester Bowie Jazz-Album (McCaffery,*After Yesterday's Crash*, p.xx).

[51] It includes, in fact, almost every single avant-garde movement/artist/writer/musician of the 20th century, for listings see: McCaffery, "Random Sampling of Avant-Pop Works", in: *After Yesterday's Crash*, pp.xxx-xxxi; or the: Avant-Pop Manifesto (REMIX), *In Memoriam to Post-Modernism* (no page numbers).

viewing habits"[52] and it was absorbed by the mainstream and lost its avant-garde spirit in the process.[53]

But can such an appropriation by the mainstream be avoided? Can avant-pop keep the avant-garde element despite the (over-?)exposure on the WWW and other electronic channels such as newsgroups[54]. Their practitioners hope they can, not despite, but because of using the computer networks as their main forum, which they see as a way to escape the establishment and keep up a subversive avant-garde while reaching a large audience. As Mark Amerika puts it in his much publicised Avant-Pop manifesto:

> By actively engaging themselves in the continuous exchange and proliferation of collectively generated electronic publications, individually designed creative works, manifestos, live on-line readings, multi-media interactive hypertexts, conferences, and so forth, Avant-Popsters and the alternative networks they are part of will eat away at the conventional relic of a bygone era where the individual artist-author creates her/his beautifully-crafted, original works consumed primarily by the elitist art world and their business cronies who pass judgment on what is appropriate and what is not.[55]

But reality is rather different. Amerika has been invited to lecture to large corporations on how to successfully, innovatively and profitably set up websites; after a first Black Ice publication, the next Avant-Pop Anthology was published by Penguin, US, and even Ronald Sukenick, who has advocated in an earlier essay that his hyperfictions and avant-pop in general could "hype up reality, not [...]phoney it up but make it more intense, more exclusive and more responsive to the needs of the spirit"[56] had to admit that the concept of avant-pop had, due to overexposure, become anthologised and theorised and consequently had defeated its own purposes and in the process outlived itself.

[52] *In Memoriam to Post-Modernism* (no page numbers).

[53] *In Memoriam to Post-Modernism* (no page numbers).

[54] In the summer of 1994, for example, the alt.postmodernism usenet group was dominated for weeks by avant-pop discussions /hype.

[55] Avant-Pop Manifesto (REMIX). other versions have been posted to the alt.postmodernism newsgroup, a German version was published in *Hyperkultur: Zur Fiktion des Computerzeitalters*, ed.by Martin Klepper, Ruth Mayer and Ernst-Peter Schneck (Berlin and New York: De Gruyter, 1996), pp.253-268.

He is also optimistic that his projects and that of other associated artists will not become part of popular culture, which he sees as part of his life and of which he hates the "ways in which it distorts our relationship to the real" (Fiction for a Wired Nation), but rather a critical, defamiliarising comment.

[56] "Turning On: An Electronic Conversation with Ron Sukenick" at: `http://www.altx.com/int2/sukenick.html`.

It remains a question whether a venture like *Alternative X* - despite its problems to combine an avant-garde attitude with popular culture without contradictions - can change the role and the position of the author. With what can it replace the "individual artist-author [who] creates her/his beautifully crafted, original work" that it negates?

Amerika, and I agree with him in this point, sees as one of the important shifts from print to electronic publishing the new and radically different distribution paradigm:

> The distribution formula will radically change from:
> **Author -> Agent -> Editor/Publisher -> Printer -> Distributor -> Retailer -> Consumer**
> to a more simplified and direct:
> **Author (Sender) --> Interactive Participant (Receiver)** [57]

He also argues this will lead to more collaborative forms of writing, which is a more problematic point.

4.3.3: Collaboration

> *The future of writing is moving away from the lone creator sitting behind a keyboard cranking out magical, mystical verse so that one day he or she may find an editor or agent or publisher who will hype her or his work to those interested in commercial literary culture. Instead, the future of writing will feature more multi-media collaborative authoring that will make itself available to hundreds if not thousands or tens of thousands of potential associates around the world actively internetworking in their own niche communities. (Avant-Pop Manifesto)*[58]

> *Avant-Pop's emphasis on collaborative strategies would also seem to differentiate it from the avant-garde. (Larry McCaffery)*[59]

This envisaged collaboration manifests itself in two aspects: firstly the instant access to a large global audience who can read, comment and discuss any work published on the WWW generally, and Alt-X specifically, through discussion lists or via eMail. This exchange of ideas between authors and their readers and amongst the community of readers can feedback on the text itself which, because of its electronic form, is open to revision and amendments. And secondly, the collaboration can be understood as a high awareness of context and intertextual influences that manifests themselves in any writing and that confirms the impossibility of originality advocated already by postmodernism,

[57] Avant-Pop Manifesto (REMIX), E, at: `http://www.altx.com/memoriam`. I have outlined my misgivings about the use of the ubiquitous term interactive in the previous chapter.

[58] Avant-Pop Manifesto (REMIX), D, at: `http://www.altx.com/memoriam`.

[59] Larry McCaffery, "Still Life after Yesterday's Crash", in: *After Yesterday's Crash: The Avant-Pop Anthology*, ed.by Larry McCaffery (New York: Penguin, 1995), p.xix.

but which has become more acutely apparent in a networked culture.

> *What this means is that network culture changes our notion of what a writer is or does. [...] Perhaps there will be a general trend to move away from the conventional notion of an author who writes a text to a more loosely defined trend that reintroduces to us the notion of an *auteur*, the French word for director who has final cut or final vision.*[60]

However, this collaborative ideal is, in practice, contradicted by the practice of Alternative X, which confirms and does not undermine traditional authorial ideas in the way authors are introduced and described. One of the sections, The Write Stuff[61], contains interviews with the individual authors, asking them about methods, inspirations, opinions and generally associating the single author figure very strongly with his/her work, leading what could be described as a 'cult' status around some of them. Mark Amerika himself is a highly visible figure, who clearly sees Alternative X as 'his' project[62] , calls himself "the president" and promotes his own work and ideas through it and lecture tours, articles and interviews etc.

4.3.4: Intertextuality

> *Another related effect of electronic linking: it disperses "the" text into other texts. As an individual lexia loses its physical and intellectual separation from others when linked electronically to them, it finds itself dispersed into them. The necessary contextuality and intertextuality produced by situating individual reading units within a network of easily navigable pathways weaves texts, including those by different authors and those in nonverbal media, tightly together. One effect of this process is to weaken and perhaps destroy any sense of textual uniqueness. (George P. Landow)*[63]

Alternative X is a network of texts which are interconnected within themselves, but also have numerous links to texts outside of the site. Even where texts are not directly linked, they contain references, allusions and pla(y)giarisms and are highly aware of their intertextual context. While rejecting the possibility of originality, it does not, however,

[60] "Artists and Networking: an Interview with Mark Amerika" `http://www.york.ac.uk/~jjrkl/artlit.html`.

[61] at: `http://www.altx.com/int2`

[62] He describes the motivation behind founding altx in an interview at `http://www.york.ac.uk/~jjrkl/artlit.html`. "When I was a kid I was at once fascinated by network TV and dismayed by the lack of options. By the time I hit college, cable-TV with MTV and CNN *kind of* expanded the options but not much. I kept thinking to myself, "I want to have my own network, and I want to share it with whoever wants to tune in." Numbers didn't matter then and still don't although Alt-X continues to grow like crazy every month."

[63] Landow, *Hypertext*, p.53.

deny the possibility of creativity, nor does it abandon belief in the autonomy of the author. Alternative X sees the new role of the author as that of collector, a re-arranger, which Mark Amerika links very strongly to the idea of collaboration. But it could also be argued that this terminology of collecting, collaging and rearranging can, instead of an example of collaboration, be read as a another flawed interpretation of intertextuality.

Like the example of Shelley Jackson's *Patchwork Girl* (discussed in chapter 2), Alternative X's interprets interactivity not as inevitability, but rather as a strategy deliberately employed by the author, who can be creative in the process of collecting and arranging as a Barthian 'bricoleur':

> The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost, a text's unity lies not in its origin, but in its destination.[64]

This view, shared by other hypertext theorists[65], puts great emphasis on associative writing and especially on the linking of the author (which is very visible and directly marked, leading to what Landow calls "the virtual presence"[66] of other texts), but takes readers, who try to follow the author's associative intertextual trail, away from their own associations and intertextual references. A process which denies that intertextuality happens in two loci, that of the author and, as Roland Barthes has pointed out, that of the reader; hypertext, rather than obscuring or breaking down the boundaries between author and reader, strengthens the position of the author.

4.4: Technology and the Separation of Author and Text

Computer writing emphasises the materiality of the text and makes this a concern not only for a minority of (literary) artists, but a common feature of text composition. Even in the simplest word-processing program the author of a text can change its size, emphasise certain parts by underlining, bold print or italics and choose from a large number of typefaces, from conservative to modern. In more elaborate Desktop Publishing (DTP) programs countless effects can be added: text can be warped, mirrored, put in boxes or

[64] Barthes, "The Death of the Author", p.148

[65] see for example Janet Fiderio, "Grand Vision: Hypertext Mimics the Brain's Ability to Access Information Quickly and Intuitively by Reference." *Byte*, vol.13 no.10 (1988), pp. 237-40, 242.

[66] Landow, *Hypertext*, p.88.

have shadows added.

These possibilities are, however, not always welcomed. In a *Newsweek* article entitled "A Font a Day Keeps My Muse Away"[67], journalist Jerry Adler expresses a strong dislike of the visualisation of language through word-processors, which leads to a situation where he has to choose from "dozens of fonts in a mind-boggling array of sizes, from a cornucopia of border designs and an array of terminal curlicues, darts, starbursts and fleurs-de-lis that would look presumptuous on the letterhead of an emperor". He calls himself an "extremist" on the subject of verbal vs. graphic representation, a puritan who wants to keep the two separated, not go along with theories that want to blur the border between two forms of representation and electronic writing that put the theories into practice. He wants to use words to describe what he has to say, without having to worry about what they look like on the page, because "I'm a writer, that's what I do."

Some might agree, but the majority of users of word-processors enjoy the greater power that electronic writing undoubtedly allows over the visual appearance of the text - and with high-quality printers now affordable and direct publishing of electronic text on the internet more and more popular, authors at times have complete control over the presentation, the peritext, of their writing. So far printing technology has led to an increasing separation between the author and his/her text, a consequence of electronic writing is to bring the two now closer together again.

Before Gutenberg's invention of the movable-letter printing press in 1434 when the mass-reproduction of identical books became possible, the majority of books were handwritten. They were done with amazing skill, often with ornate illustrations and elaborate initial letters. Their creators were, as well as authors or copyists, artists at the same time, responsible not only for the contents, but also for the appearance of their texts. Gutenberg's invention changed this and the author's job (writing and preparing the textual side) and the typographer/printer's (working on the visual side of a text) became two separate activities. Writers handed over the responsibility for the layout and look of their text to the printer. Typography was no longer considered an integral part of

[67] Jerry Adler, "A Font a Day Keeps my Muse Away", *Newsweek*, 24 October 1994, p.49.

the creative act and consequently lost much of the important status it had had previously.

One of the great differences and advantages of written cultures over oral cultures is the possible separation of the production of a text from its consumption. Whereas an oral narrative requires an audience that is at the place of production at the time of production, writing preserves a text over both a time (it can be read an hour or a century later) and space difference (it can be read at a different place from where it was produced). Consequently a separation between creator and creation is created, the text exists independent from its author and can be 're-produced' without him/her. The printing press enforced this, taking away the individuality of a handwritten text and replacing it with the uniformity of print that shows traces of the author maybe in the writing style but no longer in the writing itself.

Many authors and artists (William Morris and Virginia Wolff are two prominent examples) have been unhappy with this separation of author and text and the increasing uniformity and unattractive appearance of books[68] and tried to reverse the trend by creating what is generally called 'artist's books'[69], which combine visual and textual expression and blur the distinction between the two artforms . In the mid 19th century Morris was "shocked by the shoddiness of the industrial revolution"[70] and the uninspired typography and low quality of printing that due to increased mechanisation of the

[68] The industrial revolution affected, of course, also the printing industry. One important development was the invention of type casting machines, that led to the production of a large number of new different typefaces, and in the early 18th century a large number of so-called "display-letters" appeared on the market. Printers suddenly had at their disposition fat-faced, italics and sans serifs typefaces (in contrast to the until then dominant roman type), as well as many other new designs, some of them true monstrosities. "The appearance of bills and posters, labels, letterheads, tickets and all kinds of ephemeral printing changed completely" says John Lewis in his book on typography. Printers used them extensively, often combining many different typefaces on one page - a technique that looks to us now rather dated and chaotic. Yet book typography remained basically unchanged. "Books were still printed in the style and format the the Italians [Renaissance printers] had established in the fifteenth century". (John Lewis, *Typography: Basic Principles. Influences and Trends since the 19th Century* (Studio Books: London, 1963),p.9)

[69] For a discussion of artist's books in the twentieth century see Johanna Drucker's study: "A Century of Artists's Books" at: http://www2.granarybooks.com/granarybooks/artists/drucker2/drucker2.html (27/8/1996). Also interesting are two exhibition catalogues: *Artists' Bookworks, A British Council Exhibition* (London: British Council 1975). and: *Buchobjekte, Ausstellung der UB Freiburg im Breisgau vom 13. Juni bis 10. Juli 1980*, Ausstellungskatalog, 1980. A definition is given by Chris Peregoy: "An artist book is not solely a book that is made by an artist, or a collection of images by an artist. An artist book is an object that deals with or extends the function of a book. A book provides a reading and sequences of images, words and other conceptual ideas. Artist books extend upon this reading and create new ideas or structures to question or comment our traditional notion about books." (Chris Peregoy, "The Structure of the Virtual Book" at: http://imda.umbc.edu/people/chris/chrispaper.html)

[70] Lewis, *Typography*, p.9.

printing process had by then become the norm for mass-produced books.

The problem with artists' books is, of course, that they require much skill, money and resources to produce. Small numbers of expensive books are produced using technologies that become more and more outdated and are not suitable for a mass market. Nor is the concept of self-publishing feasible, since it requires not only a great deal of skill but also expensive equipment.

The telegraph and the telephone made the world smaller and a vast amount of information became almost instantly and constantly available. The demand for cheap reading material and fast distribution of this information, predominantly by newspaper, increased constantly and with it came further advances in printing technology. Typesetting machines eventually became widely used and made the laborious typesetting by hand redundant and with it newspaper production much faster. Photography was a new and important invention and once the technology to include it in newspapers matured, radically changed their layout. Short bold headlines and captions in newspapers and on billboards were competing for the readers' attention and try to guide them the masses of information flooding in.

The computer is, on the one hand, only the last in a chain of technological developments that made the layout of printed pages more flexible and the including of images and illustrations easier. There are, however, some important differences. The average computer user has now access to facilities that before were only available to the professional printer and the professional publisher. The creator of a text can now easily, with a few keystrokes and hopefully a good eye for layout, decide for her/himself about the look of his/her text. The visual aspect becomes again an important part of the creation process, just as it was for the scriptor of mediaeval manuscripts and just as Morris and other artists concerned with artists' books wanted it to be. This time a technology is used that is both efficient, unlike handwriting, and cheap and widely available, unlike handprinting. There is now scope for individual expression no longer only in the style of writing, but also in its physical presentation. Author and text are again coming closer together.

Electronic text processing and distribution systems can be described as having two opposing characteristics: on the one hand they allow authors to leave their work in a constant state of flux and to write and re-write not in one solitary act, but in acts of constant feedback and collaboration, with a work embedded in a network of other texts. On the other hand they give authors much greater control over any aspect of their text and cut out the collaborations of the traditional print production process.

Alternative X and, one could argue, the whole avant-pop project, tries to straddle the gap between those two extremes and, in the process, inevitably becomes tangled up in contradictions. On the one hand it not only fully accepts notions of interactivity but implements them in practice as much as possible; due to its internet existence it can exploit the possibilities of electronic links to other texts to the full. Consequently it has to accept one of the premises of intertextuality, namely the changing role of the author not as original creator, but as re-arranger or, as Raymond Federman puts it - pla(y)giariser[71]

> [I]magination does not invent the **SOMETHING - NEW** we too often attribute to it, but instead how (consciously or unconsciously) it merely imitates, copies,repeats , echoes, proliferates - **plagiarizes in other words** - what has always been there. [...] By cutting itself from the authority of its creator and his precious imagination, art evacuated from itself (from its center) the imposture of originality. [...] As a result, contemporary (postmodern!) culture could no longer produce original works of art (**masterpieces**), nor could it have great artists (**masters**). It could only produce works of art that resemble one another, and artists who imitate or plagiarize each other's work[72] .

The idea of pla(y)giarism is not a new one (Federman first used the term in his book *Surfiction* in 1975[73]) but does become more acute in the electronic medium, where copying, repeating and plagiarising is so easy to do that it develops from a mainly theoretical proposition to everyday practice[74] .

But at the same time the medium puts authors in a stronger, more self-sufficient position, and Alternative X embraces the possibilities of direct, unfiltered internet

[71] deliberately "with a **Y** because I am also playing", Raymond Federman, *Critifiction: Postmodern Essays* (Albany, NY: State University of New York Press, 1993), p.52.

[72] Raymond Federman, *Critifiction: Postmodern Essays* (Albany, NY: State University of New York Press, 1993), p.52; 56.

[73] Raymond Federman (ed.), *Surfiction: Fiction Now...and Tomorrow* (Chicago: The Swallow Press, 1975).

[74] And in some contexts to a real threat, as the continuous debates about copyright, copyright protection and, on the other hand, freedom of speech/information show.

publishing for authors and artists, who would otherwise not find a voice and encourages individual projects, including the founder's own, not least in the Black Ice publication side of the project and the avant-pop anthologies. In that respect Alternative X is traditionally avant-garde, in that, despite claims to openness and inclusiveness, it remains a relatively close and selective group and is, in its protection of the author persona, still a conventional publishing venture.

These contradictions are by no means unique to Alternative X, they can be identified as a general undercurrent in many internet / hypertext projects and hypertext theory. Similar tendencies can be found, for example, in Stuart Moulthrop's article "Electronic Fiction and the Lost Game of the Self", where on the one hand he applauds the manner in which electronic writing challenges notions of copyright ("Copyright, we might note, is only one wall in that vast fortification called intellectual property, the main line of defence for the current information economy. [... W]e interactivists may be tampering with the primal force of capitalism"[75]), and only a few pages later he claims that one of the main advantages of Theodor Nelson's Xanadu[76] system is that it provides a "scheme for computing electronic royalties"[77] by crediting an author's account (and debiting the reader's) every time a portion of text is accessed. He also notes that Xanadu might be a "way to restore a basic American freedom: the *personal* liberty of the press"[78] , while he later advocates collaborative writing, albeit within the framework of Xanadu, where each contribution to a collaborative project would be credited to its author.

> An electronic publishing arrangement based on broad authorship franchise might support forms of collaborative writing - "sharecropping" or communal world farming - which depart strongly from the narrative schemes of books, movies, and games. Imagine a model for electronic fiction based not only on role-playing or virtual reality, but on a network of interlocking or interlinked narratives, organized perhaps in some hypertext format. Contributions to this shared enterprise, which might include vignettes, digressions, parallel stories, parodies, and full-scale fiction, would be clearly

[75] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self.'", *New York Review of Science Fiction* , n.66 (February 1994), 1, 8-14, p.11.

[76] Theodor Holm Nelson is credited as the inventor of the term "hypertext". He thought up his Xanadu system in the 1960s as a network computer system that would allow individuals to publish, republish, link to and copy texts (an idea not dissimilar to the current WWW), but would also solve problems of copyright protection and compensation by implementing a mechanism through which the original author of a text is paid 'electronic royalties' each time his/her text is accessed (be it whole or in parts, on the original site or quoted somewhere else). Though the concept has been very influential and research work has been going on over the last 30 years, there has not yet been a workable version of Xanadu available. Nelson's project - which developed out of Bush's Memex, neither suggest literary uses, nor does it want to replace or undermine authorial figure. (see: http://www.xanadu.com.au)

[77] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self.'",p.13.

[78] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self.'",p.13.

credited to their authors[79] .

Plenty of collaborative projects like the ones Moulthrop is describing already exist, though without the possibilities of "sharecropping", i.e. without the possibilities of gaining financially, and often, in those cases where individual contributors are not named, even without the possibilities of gaining publicity or critical acclaim.

One does, however, get the impression that this is not a consequence of the lack of available technology to do otherwise, but rather an integral part of the philosophy of those collaborative projects. They stand on the other extreme to individual vanity publishing websites and are trying to avoid the contradictions Alternative X and Moulthrop find themselves in, by practising (or at least attempting to practice, since they are not entirely free of contradictions between theoretical claim and their implementations) what in other places often remains theory: an undermining of the named, singular author figure, but also, since most writing is reactive writing and most pieces are created as direct response and continuation of another piece, an undermining of the singular authorial voice.

There are many collaborative writing projects on the WWW[80], many, as Moulthrop rightly predicts, with only a short lifespan[81] , and only a few gather sufficient momentum and encourage enough contributions to reach any considerable complexity.

4.5: Large-Scale Literary Collaborations

Collaboration on literary projects can have many different formats. In the previous section I looked at the often unwanted, and in literary studies underestimated, background collaboration of friends or editors that Stillinger focuses on, the inevitable collaboration of many different factors in the complex print and distribution process that

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[79] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self.'", p.11.

[80] *Hyperizon* has a subsection on collaborative writing at http://www.duke.edu/~mshumate/list01.html#multiple, a good starting point. See also a collection of collaborative writing links at http://www.innotts.co.uk/~leo/collwr.html, and the short essay "Collaborative Hyperfiction" by Clay Universe on the Mulciber website at: http://odin.cmp.ilstu.edu/~esswedl/Mulciber/works/theory/collab.html; and a comprehensive "Guide to Fiction of the Web: Collaborative Fiction"at: http://newt.blackboard.com/winter/guide/collabor.html.

[81] Stuart Moulthrop, "Electronic Fictions and 'The Lost Game of Self'", *New York Review of Science Fiction*, n.66 (February 1994), 1, 8-14, p.14. Ironically, some of the projects I am looking at in this thesis have suffered exactly this fate and have been discontinued.

Coser, Kadushin and Powell describe, and the attempt to use the possibilities of electronic publishing, such as Alternative X, to cut out the later by direct publishing and encourage the first by peer review and instant feedback on text by a close community of fellow writers and readers.

In the second part of this chapter I will focus on projects which approach the question of collaboration in a very direct and practical way, by setting up facilities for a group of authors to work in parallel on, in principle, an evergrowing and everchanging literary project. These collaborations, not unheard of but rare in print, have developed into an important part of the literary internet scene[82] and can have different emphases: a small number of authors or large-scale collaborations, crediting the individual contributions of their respective authors or anonymous, heavily edited or open for changes and additions. Another possible categorisation, one which is proposed by the "Collaboration on the Web" website[83] and which I like to adopt is a categorisation by structure, and more precisely between a linear and a non-linear structure. Despite the vagueness and inadequacies of the terminology of linear and non-linear when used to distinguish hypertext from print (see chapter 2), it is, in this clearly defined context, a valid and useful distinction.

In a linear structure, one initial node (e.g. a paragraph of a short story or a chapter of a novella) is followed by only one other, which in turn is continued by just one; the collaboration is strictly temporal and linearly accumulating. In a non-linear arrangement, often organised in a branching out tree-structure, contributors are free to add to an already existing branch or create a new one, therefore offering a greater flexibility as to where to add a link, but also of developing any branch locally in more unexpected directions. Cross-referencing between nodes is often possible, and contributions are more spatially located since they affect the narrative development only locally. These are the hyperfictions, claim the authors of "Collaboration on the Web", which "take full advantage of their hypertext and collaborative styles [...and] are true hyperfiction"[84].

[82] They often use a combination of eMail and the WWW: contributions are mailed to the editor/editorial board/facilitator and then selected, edited and finally uploaded to the project's webpages (the selection and editing powers do vary from project to project).

[83] `http://www.innotts.co.uk/~leo/collwr.html`.

[84] `http://www.innotts.co.uk/~leo/collwr.html`.

4.5.1: Linear Collaboration on the Internet

Two examples of linear collaborations are set up as a literary competition. INTERNOVEL[85], one of the older projects around, was set up a few years ago. $500 are offered for every published chapter, and the now several novel projects range from romance to crime.

Probably the so far most spectacular and most widely publicised on-line writing venture was the short story "Murder Makes the Magazine", which was written on-line over 45 days between 1st August and 15th September 1997 and was a project initiated by amazon.com[86], the largest internet bookseller. What made this project different from others and attracted the attention of Radio 4 news and *The Guardian* was the fact that amazon.com had managed to persuade John Updike to, in his own words, stick his "head into the mouth of the electronic lion"[87] and to write the first as well as the last paragraph of the crime novella.

His initial contribution, a short 300-word segment of a novel Updike started thirty years ago but never finished, was put on a webpage, together with an invitation to submit each day a continuation of similar length, of which one was chosen and then added to the growing narrative body. $1000 were paid each day for the chosen paragraph. Over 16,000 aspiring writers entered according to amazon.com every day, all of which had to be read and from amongst which the most promising was selected and published - a success that stunned both the initiators and Updike himself, who, while not convinced of the overall quality and consistency of the work, comes across as impressed by the overall success of the project:

> After reading the entrants, Updike admitted there were some glaring inconsistencies in the story but said it had been fun to do. Despite the many authors, he said that it was hard to tell 'where one voice ends and the next begins'[88].

Another similar project was launched by the *Grimsby Evening Telegraph* as part of the East

[85] http://www1.primenet.com/novel.

[86] http://www.amazon.com.

[87] Joanna Coles and Giles Foden, "John Updike's Twist in the Tale", *The Guardian* (September 13, 1997) p.3.

[88] Coles and Foden, "John Updike's Twist in the Tale".

Lincolnshire Literary Festival[89] early in 1998. Instead of just one well-known author, it included the names of established authors such as Sue Townsend, but also of lesser known professional authors and journalists, local MPs and other political figures in its line-up for the first few sections of the story and then offered readers of the website a chance to contribute.

It is precisely this aspect, the chance readers get to collaborate with well-known, experienced and established authors and have work published alongside theirs which makes these experiments so successful and popular, but also intriguing from a point of literary theory (since they challenge assumptions of what a published author is) and also distinguishes them from collaborative print experiments.

4.5.2: Linear Collaboration in Print

Collaborative 'relay' writing is a phenomenon greatly facilitated and revived by but not unique to electronic text. Examples of literary print collaboration can be found, though they differ, because of the nature of the medium, in two aspects: They are co-operations of a smaller number of mostly already established authors, and more importantly, already finished when they go into print, not allowing the reader to observe the process of construction on a day to day basis, nor to contribute themselves.

London Consequences[90] is an example of such a work. Introduced on the cover as a novel edited by Margaret Drabble and B.S. Johnson, it is the work also of eighteen other writers[91], and the result of a collaboration of London novelists for the Festival of London in 1972 and subsequently published by the Greater London Arts Association. The first (and later the last) chapter together with an outline of the two main characters were jointly written by Drabble and Johnson and then passed on to the first author, who had 5 days to continue the novel and contribute a chapter, which would cover a certain

[89] www.grimsby-online.co.uk (search archive for "Future Perfect"). Here the beginning of the short story "Future Perfect: The Office Years": "From the bottom of the valley, you could see what the locals meant. God's armchair, they called it. The 300 foot limestone stand shimmered in the January heat. Just the place for a God to park his arse after a hard night's work, she thought....."

[90] Margaret Drabble and B.S. Johnson (eds.), *London Consequences* (London:Greater London Arts Association, 1972).

[91] Paul Ableman, John Bowen, Melvyn Bragg, Vincent Brome, Peter Buckman, Alan Burns, Barry Cole, Eva Figes, Gillian Freeman, Jane Gaskell, Wilson Harris, Rayner Heppenstall, Olivia Manning, Adrian Mitchell, Julian Mitchell, Andrea Newman, Piers Paul Read and Stefan Themerson

allocated period of the day the story is set in, and to then pass it on to the next writer in the line. Each subsequent writer had access to all the chapters that had so far accumulated.

> It is Easter Saturday 1971. For Anthony Sheridan, political journalist, and his wife Judith it was going to be a much-needed whole day together; but he has been called unexpectedly to the office on a mysterious and irregular assignment by Twomey, his boss. From here the story takes off into eighteen different minds, and it becomes hilarious, elevated, tragic and moving by turns[92].

What holds the narrative together and makes it more than just a loose collection of "hilarious, elevated, tragic and moving" short stories are on one hand the strong main characters, Anthony Sheridan, his boss Twomey and also his wife Judith, whose basic characteristics remain consistent throughout the text, and on the other the strict timeframe of one day of which each author had a certain portion allocated.

Consistency of style is, however, not a factor that contributes to holding the narrative together. Readers are from the outset and throughout the reading aware of the collaborative nature of the story, especially since many of the chapters have a very distinct style and break noticeably with the preceding ones: some chapters are fairly conventional, others read like a surreal dream sequence (chapter 14), or are heavy on dialogue (chapter 9); an omniscient, detached, 3rd person narrator (chapter 4) followed by interior monologue from Sheridan's 1st person perspective (chapter 5); in chapter 17 we find an intervention from god; certain chapters (13, and especially chapter 20) are highly self-reflexive about the collaborative project of the novel. In the last chapter, for example, Anthony and Judith watch TV in bed,when

> they suddenly became aware that they were watching a panel of twenty novelists discussing the plight of the modern novel.
> 'Oh no' said Judith.
> 'Oh Christ,' said Anthony, spilling what remained of the gin on the carpet. [...]
> 'I know it is impossible,' said the interviewer for all tele-cultural occasions, 'but what would you do if you were invited to write a novel together?'
> Twenty voices answered in a babel of incomprehensibility: realists and experimentalists, cynics and idealists, obscurantists and populists, men and women, young and unyoung, poor and poorer, all talked and none listened[93].

The chapters are not signed, but a competition (Who wrote that?) at the end of the book

[92] Margaret Drabble and B.S. Johnson (eds.), *London Consequences* (London: Greater London Arts Association, 1972). -plot summary on back cover.

[93] Drabble and Johnson, *London Consequences*, p.150.

encourages readers to identify the author for each section and offers a £100 pound reward for the correct answer. Individual style was given preference over collaborative co-ordination, the individual author's realm is still very much preserved, despite the anonymity of the chapters it is assumed that the authors' voices are strong enough to present themselves regardless.

The collaborative project did, however, work better than the panel-discussion on TV suggests. The result is not a cacophony of competing voices, but rather a collection of distinct voices that work both with and against each other, but, despite all idiosyncrasies, never lose their overall coherence, mainly because of the factors outlined earlier (strong character, tight timeframe) and despite only very little editing by Drabble and Johnson.

> We as editors provided the initial time scheme and main character, but we didn't do much editing afterwards. This is because we think the virtue of this novel is not in any consistency we might impose on it, but its extreme variety. Most writes have felt free to be very much themselves, though we've all been a little coloured by each other as well. Writing novels is a solitary job, and probably none of us imagined that a great work of art would emerge from our collective efforts. But that's no reason why novelists shouldn't try to have a bit of fun, and we hope (and anticipate) that readers will, too.[94]

It is interesting here that both Updike and Drabble and Johnson do not regard the results of their collaborative efforts as works of great literary quality, but put emphasis on the fun element, describing their work as some sort of game.

This is an attitude also shared by Dermot Bolger, initiator, contributor and chief editor of *Finbar's Hotel*[95], a collaboration between seven Dublin writers, published by Picador in 1997, who sees *Finbar's Hotel* predominantly "as a piece of mischief"[96]. After Bolger's initial twenty page synopsis of hotel layout, history and staff, each of the writers took it

[94] Drabble and Johnson, *London Consequences,* editors note, p.5.

[95] *Finbar's Hotel,* collaborative novel by: Dermot Bolger, Roddy Doyle, Anne Enright, Hugo Hamilton, Jennifer Johnston, Joseph O'Connor, Colm Tóibín, devised and edited by Dermot Bolger (London: Picador, 1997).

[96] Nicolas Wroe, "The Secret of Finbar's Hotel", *The Guardian* (September 12th, 1997), G2, p.6.

upon themselves to fill a room each with a character and narrate a story from his/her perspective. Both the narrative space (the hotel) and the narrative time (one evening) are clearly defined, and what holds the text together as a book are the - direct or indirect - encounters of the characters in this space and their descriptions of each other. As the book moves on and readers move from one room to the next, new characters tell their story. They are often already familiar to the reader through outside description by other characters and gradually a multifaceted but more and more complete picture of the hotel and its guests gets built up.

That the reader gradually develops this omniscient position is not an automatic consequence of the narrations themselves, but was strongly encouraged and worked on by Bolger, who says in a *Guardian* interview that he had

> to do a bit of knitting to make the connections, and to make it a book as well as a collection of short stories. [...]
> A writer normally creates their own fictional universe, so they had to be very professional about having things inserted that didn't do anything to their story but helped the book.[97]

The individual voice of the author vs. overall coherence in the narrative as a whole are the two elements that each project needs to balance individually, and there are reasons that explain why Bolger felt a greater need for editorial control than Drabble and Johnson: The contributors to *Finbar's Hotel* were not aware of each other's contribution, could therefore not do much of the 'knitting' themselves. *Finbar's Hotel* has not the same strong characters throughout the book - each chapter features a different person. And lastly the narration does not have the same linear development, i.e. it does not, unlike *London Consequences*, follow its main character through a day. It is a spatial text, in that the narrative space, the hotel, gets gradually filled up with characters, stories and connections between them[98] .

I would suggest that three elements can be identified that contribute to the feeling of

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[97] Nicolas Wroe, "The Secret of Finbar's Hotel", *The Guardian* (September 12th, 1997), G2, p.6.

[98] It is, however, a text that works very well in its current print format, contradicting the common assumption (see chapter 2) that 'non-linear', spatial text are better represented in hypertext format, where they could be represented spatially and accessed randomly. But one of the factors that contributes to making *Finbar's Hotel* an intriguing read is the carefully organised process of discovery, a factor which can be represented adequately and successfully in print.

(in)coherence of collaborative writing: strong characters, well defined narrative time-framework and well-defined narrative space[99]. The less these three elements are supported by the outline of the project, the more editing is required, and it is therefore no surprise that not only in the linear collaborative print and internet projects, but also in the non-linear branching electronic collaborations, which, one could argue, are necessarily episodic and less based on coherence an editorial policy has to be present.

For the danger with any mischief, game or fun writing, as the collaborations and other electronic projects have been described, is that it might be fun for writers to contribute, but not necessarily fun for readers to read, and a balance between over-editing and homogenising (thereby taking away the enjoyment for both readers and authors) and too much incoherence (which would fail to bring together the individual contributions as a whole) needs to be struck.

4.5.3: Non-linear collaborations (electronic format only)

Various projects on the internet work on an add-on basis, which means that they operate a basic tree-branching structure, i.e. every story node offers two or more possible continuations, some of which may not yet have been written, but for which readers are given the opportunity to fill the void and continue the dead-end storyline. One example worth considering in more detail are the relatively popular *Stories from Downtown Anywhere*.

Situated in *Downtown Anywhere* (sm), a "virtual salon for the marketplace of ideas (with a secure and real economy)"[100] with shopping streets, libraries and sports events, *Stories From Downtown Anywhere* is an example of a collaborative fiction project that is organised in such a simple tree structure. After a character and an initial situation / event is sketched out in the first part of the story, two or more options of how to continue are offered. Those are then taken up by other authors who develop the story further and whose contributions again end with a few options.

[99] Other elements, such as coherence in style and logical narrative development, which one could apply to single-author text, will, by definition, be missing in multi-voice collaborations.

[100] Downtown Anywhere at http://www.awa.com.

In the Business District of Downtown Anywhere, for example, we find the street poet Duncan Z. McGregor, who wakes up one morning in his usual alley and finds a forgotten sonnet in his pocket that he wrote the night before (under the influence of a considerable amount of alcohol). He likes it and, pleased with this start for the day, pushes his trolley through the streets. There he is approached by a young woman. He a) avoids her and runs away, into another alley where he finds a mysterious dead (but beautiful!) woman. He decides to run away again. Or to call the police? Or to have a closer look at the body (after all it is that of an attractive female)? In which case he finds a diamond ring next to her...

Or, b) He waits for the woman, who throws herself to the ground, swears eternal love and starts to kiss his feet. Slightly embarrassed, he gives her last night's sonnet, hoping that that will get her off the ground and away from his shoes. He leaves and nothing happens. Or he leaves and she calls out his name and turns out to be a long forgotten acquaintance from his past life before the days on the street. They have breakfast together and when he carefully tries out the name he believes to remember is hers, she faints - or does not react at all...

Or, c) does he talk to the woman, who wears strange clothes and invites him to join her at an ashram? He can then decline the offer, or think about it and try to touch her (to find out that she is really a man) or decide to take up the offer and make his way to the bus-stop (to bump into an old friend of his who is in trouble)...

In Westmoreland, the well-off end of town, Heather, a call girl is on her way to visit her twin sister Wanda, who is married to a bank manager for their regular monthly coffee-time chat. Bored with the regularity of these meetings, she thinks of breaking the date and...either turns round or nevertheless visits her sister as planned.

Like similar collaborative projects, storylines in *Stories From Downtown Anywhere* are so twisted and complex that they are virtually impossible to summarise. Even with only a handful of starting points and only two or three possible developments at the end of each piece, the number of links grows rapidly. Not all the links actually exist at the moment; some, though having been defined by the previous author, carry an E (for Empty) and are an invitation to readers to fill them with their ideas and send their 500-word contributions to Charles Deemer, the "Editor-in-Chief" of the project. An editorial

board checks the contributions before publication and looks out for consistency in style and content as is outlined in the "Writer's Guidelines"[101] :

> The editors are looking for links that are consistent in content and style with previous links; for literate and entertaining writing; for suspense, comedy and surprises.

That not all of the nodes exist, and readers therefore always end up in a cul-de-sac with an empty note (albeit hopefully by then motivated and engaged enough in the developing storyline to continue it) is not just a problem with *Stories from Downtown Anywhere,* but a mathematical 'exponential'[102] problem, which cannot be overcome, even though a project such as *No Dead Trees* (see below) hopes to eventually do so.

The initiators behind the Invisible Seattle/in.s.omnia literary projects have identified another problem with any tree-branching collaboration, a problem which they call the "add-on problem":

> Over the years the in.s.omnia's research into the precedents of collaborative fiction has identified a persistent quandary: the add-on story. Most collaborative fictions founder because of the linear structure of the conventional narrative. Writers pass the accumulating tale to one another, but only the first has true creative freedom. The subsequent writers are increasingly hemmed in, doomed to study the precedents to avoid continuity errors.[103]

The *No Dead Trees Interactive Novel,*[104] another current collaborative fiction project, is optimistic that it can overcome both problems, the exponential and the add-on problem:

> The CyberNovel is one of severl [sic] attempts in Cyberspace to create what has been deemed impossible -- an interactive novel.
> We realize that for a novel to be interactive it must have every possible beginning, middle and ending. Characters must be able move in random directions with different outcomes and consequences as a result of given actions and reactions.
> For the average novelists, this is an impossible task. Novels, typically written on dead trees, move in one direction and have linear actions and reactions. An interactive novel. however, must be able to move in any direction at any time.

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[101] at: http://www2.awa.com/stories/guide.html.

[102] as it was described by Garreth Rees at http://www.cl.cam.ac.uk/users/gdr11/tree-fiction.html (8/11/1995).

[103] Wittig, Rob, *Invisible Rendezvous: Connection and Collaboration on the New* Landscape of Electronic Writing (Hanover,NH: Wesleyan University Press/University Press of New England, 1994), p.23-24. In.s.omnia is both a group of collaborating artists and an electronic bulletin board based in Seattle. In *Invisible Interview*, Wittig describes the history and nature of the electronic collaborations, but also of earlier collaborations on computer and print literary projects, such as a novel, *Invisible Seattle,* for which contributions were collected from the population of Seattle and then compiled with the help of a computer. In.s.omnia is rooted in a (literary) avant-garde tradition - Ossian, Sterne, Verne, Surrealists, OuLiPo - and consciously explores in its work theoretical questions about "fundamental constructs of late Romantic literature: the Author,the Work, the Reader" (dust cover).

[104]*No Dead Trees*, electronic text at: http://www.intserv.com/~dobenson/NDT/novel_main.html.

> To accomplish this, many writers will take part in the CyberNovel. Each author will write scenarios, sketches or stories about the characters, and these will be linked together so that different links take characters in different directions[105].

Of course these claims are exaggerated; *No Dead Trees* offers in practice neither a solution to the exponential problem (at the moment it has attracted only a handful of contributors and the overall length is far from the rather Borgesian sounding every beginning, middle and end) nor does it succeed in creating the impression of an 'infinite' text, currently it reaches maybe the length of a short novella. And while contributors are encouraged to develop new characters and scenarios, they are nevertheless bound by the tone and choice of genre (the vampire novel), especially since the editorial policy that seems to be at work[106] suggests rigorous weeding out of 'unsuitable' contributions.

One has to wonder, however, if the add-on problem really is such a problem. Is a framework that sets a creative framework and that allows other writers to react to other material really that undesirable, or could it not be argued that (apart from the fact that no writing exists in a vacuum and is always a, conscious or unconscious, direct or indirect, reaction to other texts) the restrictions of collaboration in general and the add-on-story in particular help to channel literary creativity[107] ?

As the Invisible Seattle group found out in their own work, trying to encourage the people of Seattle to contribute to the opus *Invisible Seattle: A Novel by Seattle*, is that "an extraordinary creativity on the part of people who did not consider themselves writers could be tapped under the right conditions"[108].

> Satisfactory participation relied on a balance between creative focus and creative freedom. Nothing produced more stultifying results that the sloppy invitation to "be creative" and "write whatever you want".[109]

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[105] *No Dead Trees*: "What we will accomplish", at: http://www.intserv.com/~dobenson/NDT/novel_main.html.

[106] Additions need to be submitted to the main author's eMail address.

[107] Which is a view certainly supported by the members of OuLiPo, who have been a great influence on the work of in.s.omnia and who felt that conscious and voluntary constraints (such as the anagram, acrostic, the lipogramme, the palindrome - and many other forms explored by the group) can channel, if not enhance, author's inspiration. (For a discussion of formal constraint and OuLiPo see the section "Formal Constraint" in: Motte, Warren F. (ed.), *Oulipo, A primer of Potential Literature* (Lincoln and London: University of Nebraska Press, 1986), pp. 10-13.

[108] Wittig, Rob, *Invisible Rendezvous: Connection and Collaboration on the New Landscape of Electronic Writing* (Hanover, NH: Wesleyan University Press/University Press of New England, 1994), p.128.

[109] Wittig, Rob, *Invisible Rendezvous* p.66.

Instead they opted for different ways of encouraging and focusing creative participation with questions such as: Give me the title of a novel with Seattle in the title. Send a one-line description of your car. What were you doing at 4:10 am, 5:27 am, 7:41 am...? What are things that are disappearing now in Seattle?

Writing within constraints, reactive writing to given input, is a writing much closer to conversation and its direct exchange of ideas, and is a form of authorship that worked well for even those contributors who had never considered themselves to be either creative enough to produce 'literature' or as 'authors' at all. What in.s.omnia also realised is that, instead of waiting for contributions to come in, it is necessary to go out and approach people to get them to participate in a collaborative project; for their Invisible Seattle project, for example, they send out "literature workers" equipped with work overalls and hard hats to collect the data which would eventually be turned into the novel[110].

This approach rejects the belief that the innovative, solitary writing is the only possible or at least the only valuable form of creative authorship, which has, however, become to be regarded as the form to define literary creativity and gave rise to the 'myth of the solitary genius'.

4.5.4: Other Structures of Collaborative Projects: City Metaphors

Other structures for collaborative projects than the often rather restricting (for the author) and disappointing (for the reader when s/he repeatedly arrives at a dead end) tree-branching structure can be imagined: structures in which, while working within a framework and in reaction to previous contributions, more space is left for the individual writer to develop his/her style. Invisible Rendezvous suggest one possible way themselves, namely to put less emphasis on linear development and temporal, causal and stylistic coherence. Subsequent authors are allowed, if not encouraged to contradict each

[110]The novel was a hybrid: computers were used initially to collate the text, but the end result was eventually printed out. Which made the initiators realise some of the constraints of the print format - namely that it can appear too finished, They argue "As we've seen with the novel of Seattle, policing the formal borders and declaring works "complete" and "finished" is problematic. For the time being we have come to call just about everything a "project" (Wittig, *Invisible Rendezvous*, p.107). Through their work with computers they realised how electronic text can help maintaining the work-in-progress, 'project' state for much longer and triggered experiments with computer BBS (Bulletin Boards) which eventually let to the network of in.s.omnia "rooms" that are described in detail in the book.

other, change characters or setting playfully, based on, but in creative reaction to, previous work.

In.s.omnia Zyzziva-room (one of the rooms of in.s.omnia's bulletin board), for example, developed a fictional town of the same name over many weeks. Not only was the town's name open to manipulation and grew gradually longer (into mutations such as Zyzzyzzywa) but accounts of the town's history, climate, government, buildings, history etc. were frequently doubted, changed or plainly contradicted in a fast and furious exchange of ideas.

> By contradicting the previous message, by arguing facts and events, by throwing all the messages around it into doubt, the door was opened for anyone to join, to invent, to rhapsodize and not worry about continuity.[111]

The structure used here is not the rigid tree-branching structure, but a spatial image, that of a city, that serves as the organising principle; a simple, yet very efficient device for organising a complex system of episodic and heterogeneous narratives without the obvious disadvantages of tree fictions.

The city, not only as a setting, but also as a metaphor, has been a common feature in 20th century literature, where it functions frequently as a locus of fragmented existence and a symbol for overwhelming modern life.[112] Though the cities of collaborative fiction could be linked to this element of literary tradition, I would argue that it is more rewarding to situate them in a closer relation to the city images frequently employed by computer network projects not to <u>express</u>, but to <u>combat</u> a feeling of rootlessness, and are used there not only as a navigational tool - as has been argued by Andreas Dieberger in his PhD thesis *Navigation in Textual Virtual Environments using a City Metaphor*[113] - but also to create sense of a virtual community in an ultimately placeless digital environment.

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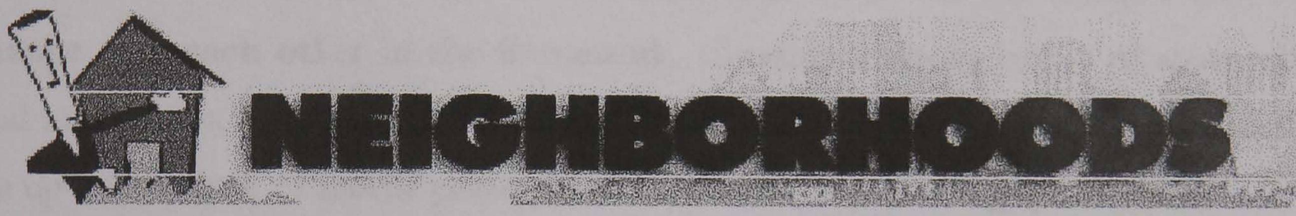
[111] Wittig, *Invisible Rendezvous*, p.25 - extracts of the Zyzziva exchange can be found on pages 24 - 26.

[112] with texts such as Döblin's *Berlin Alexanderplatz*, for further discussions see: Mary Ann Caws, *City Images: Perspectives from Literature, Philosophy, and Film* (New York et.al: Gordon and Breach, 1991).

[113] *Navigation in Textual Virtual Environments using a City Metaphor*, PhD thesis, University of Vienna, 1994, available at: `http://www.lcc.gatech.edu/~dieberger/Thesis/Thesis.html`.

Hypertext, for all its technical flash, represents not just a new medium for handling information, but also a new form of social collaboration.[114]

Much has been made of the global nature of the internet and it has been linked to McLuhan's "global village", a substitute community in which like-minded individuals can get together and exchange ideas regardless of their actual location (in which, one could argue, the sense of 'real community' is gradually disappearing). Many of these electronic forums are organised around a spatial metaphor: commercial Internet Service Providers such as Geocities, for example, arrange interest groups into neighbourhoods which are graphically represented on a city map.



Howard Rheingold uses in his book *Virtual Communities* WELL (the **W**hole **E**arth '**L**ectronic **L**ink, of which he was an early member) as an example of a functioning "virtual community" and describes very vividly the friendships, exchanges and discussions he experienced with people he only later, or maybe never met IRL ("in real life"), but also his initial reluctance towards the idea:

> [WELL is] a computer conferencing system that enables people around the world to carry on public conversations and exchange private electronic mail (e-mail). The idea of a community accessible only via my computer screen sounded cold to me at first, but I learned quickly that people can feel passionately about e-mail and computer conferences. I've become one of them. I care about these people I met through my computer, and I care deeply about the future of the medium that enables us to assemble.[115]

Similarly, Rob Wittig writes about in.s.omnia, the Seattle based Bulletin Board, that it "clearly feels like a 'somewhere' not a 'something'"[116] and goes on to argue that on-line communities such as in.s.omnia

> [...] become extensions of - not alternatives to - our everyday communities. They allow us to live in two places at once (minimum: two worlds). They force us to realize that we

[114] Myron C. Tuman, *Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.122.

[115] Howard Rheingold, *The Virtual Community: Finding Connection in a Computerized World* (London: Secker and Warburg, 1994), p.1.

[116] Rob Wittig, *Invisible Rendezvous: Connection and Collaboration on the New Landscape of Electronic Writing* (Hanover, NH: Wesleyan University Press/University Press of New England, 1994), p.25.

> behave differently under new constraints, become different people at different times (minimum: two selves). They show us that - through combinations of media, memory, and imagination- geographic zones are already constantly interpenetrating.[117]

The virtual communities, as Wittig points out, neither substitute nor lessen the influence of the communities out of which the participants in on-line collaborations come and which they bring to any project; while they share similar interests, they are also bound into a geographical but also cultural and social context. The city, but also the other spatial metaphors such as the hotel, the restaurant, the tube-train, the house[118] etc., can offer a common space onto which to project and in which to share and organise these different backgrounds and experiences: the heterogenic structure allows for diversity and for differences to be maintained, but at the same time these can be brought into creative exchange with each other in the framework. Creating a strong sense of space through spatial metaphors, especially if supported with visual aids such as maps, can also help to make up for the lack of tactile presence of the virtual surrounding space/place.

It is for exactly these reasons that these organisational structures can be useful and successful, and are therefore frequently used by, literary collaborations.

> *What we are saying to the reader is "come join us", "come explore with us", "come astonish us". Don't just read and say this is good or bad - write!*[119]

> *Uns geht es darum, mit ganz unterschiedlichen Leuten einen Multimediatext zu entwerfen und damit eine neue Ära der Literatur einzuleiten. Die bisherigen Grenzen werden überschritten, weil das Wort Wirtuelle Weiten durchschreitet, durch ganz unterschiedliche Menschen und Medien, die sich einzig im computergenerierten Raum treffen.*[120]

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[117] Wittig, *Invisible Rendezvous*, p.27. Those 'everyday communities', the actual surroundings in which people live and interact on a day-to-day basis, are of course to a large extend just as imagined as the virtual ones, as Benedict Anderson has argued in *Imagined Communities*, and exist largely because of the common acceptance of their existence in the people who inhabit them. Interestingly a process heavily influenced by print material, such as dictionaries, constitutions, legal documents etc. (Benedict Anderson, *Imagined Communities* (London and New York: Verso, 1983).

[118] for Hotel see *Hypertext Hotel* (http://www.brown.edu) and *Finbar's Hotel* (devised and edited by Dermot Bolger (London: Picador, 1997)).Restaurant: see chapter 3; *O'Brien's Cafe* at: http://dowsing.tcimet.net); tube train: Geoff Ryman, *253: The Journey of 253 Lifetimes*, the print ren (London: Flamingo, 1997) - on the web at: http://www.ryman-novel.com; House; John McDaid's Uncle *Buddy's Phantom Funhouse* (Cambridge, MA: Eastgate Systems, 1992), *SPIELZEUGLAND* at: at: http://www-public.Oz.uni-duesseldorf.de/~karlowsk/spiel.html ; other collaborations around the city structure include *Black City*, set in a 1950s South American city at: http://blackrebeldigits.com/blackcity/bcwelcome1.html)

[119] Wittig, *Invisible Rendezvous*, p.21.

[120] SPIELZEUGLAND at: http://www-public.Oz.uni-duesseldorf.de/~karlowsk/spiel.html. The project is based around a group of friends sharing the same house.

The main aim of literary collaborations, in print but even more so on the internet is, after all, to get different people together and encourage them to use their creativity in a form, i.e. writing fiction, they might not have felt comfortable with previously, in a framework that offers strong support, but without excessively homogenizing and restraining the individual stylistic ideosyncracies. A "virtual community" and its realisation in the form of the city or the hotel, can provide the organisation to accommodate the inevitably episodic[121] contributions (in which strong character and strong timeframe can not be necessarily be guaranteed and the lack of which can be made up for partly by the strong sense of space). Just as the different reports of the fictional city Zyzziva can co-exist, (they are, after all, narratives of experiences of certain aspects of the city's history and events and do not claim to be representations of the actual events themselves) different characters can inhabit the same space simultaneously and experience it differently or even contradictory. Similarly, the space in which the narratives collect gives readers the chance to explore and more importantly to join in and add to a framework more easily without the tight demands of consistency of tree-branching fiction.

4.6: Conclusion

Electronic text has certain obvious advantages over print text for (literary) collaboration. The creation process is more visibly happening over time, the work can maintain a greater element of improvisation, but also of reactive dialogue and game playing. It could also consist of a larger (and ever-growing) number of contributions resulting in a larger, more complex structure.

[121] Even in the plot-branching format - and this is especially true in an electronic hypertext, where only on node is visible at any one point - this 'self-contained' episodic character of contributions can be identified: they generally cover on event in the character's development, or one plot-twist and tend to end in a punch-line. This, however, stands in a sharp contrast with the expectations of linear development brought to the text by readers. In a less rigid framework, the tension is eased.

Why is it then that, with the possible exception of Brown University's *Hypertext Hotel*[122] , many of the collaborative fiction projects currently in process on the internet , regardless of their actual structure, fail to achieve a substantial size and fail to attract sufficient contributors to gain momentum and maintain sustained growth and are used as 'constructive hypertexts' only by a small minority? To achieve a certain complexity and make this complexity accessible and enjoyable to potential contributors, i.e. readers who come new to the text and have not experienced it over time in its organic growth, but are presented with its current state, is a very difficult aim. One of the characteristics of electronic hypertexts is that only the current node is present on the screen, with strong direct links to the surrounding nodes, while the overall work (unlike the physical presence of the printed text in its completeness) requires an imaginary effort to construct. The episodic character of the individual contributions, which is even more prominent in collaborative than in single-author hypertexts, together with the physical presence of only the active node and its direct surroundings, leads to a strong coherence on the microlevel of the narrative, while it is more elusive on the macrolevel.

Authors start off as readers and need to access the 'virtual community' first, later becoming a contributing part of it. To shift from reader to author, readers need to feel confident that they have grasped the framework and the narratives that fill it on both micro- and macrolevels and a strong editorial policy is required to try to ensure this.
Furthermore, any work with an emphasis on work-in-progress, in which the process of writing is given preference over the end-result, will cause problems for readers who come to the work in its advanced stages. While - and this is a point I quoted Updike, Drabble and Johnson and Dermot Bolger saying they are 'fun to do', - they are not necessarily 'fun to read', at least again not without the intervention of an editor.

[122] *Hypertext Hotel*, a collaborative hypertext fiction (and MOO) was set up in Robert Coover's hypertext fiction workshop at Brown University and has been going in several formats over the last few years. Hypertext Hotel has attracted contributions from authors such as Raymond Federman. Reason for that are the fact that it was initiated by Coover, a well known postmodern author and hypertext supporter (his article "The End of Books" (*New York Times Book Review* , 21 June 1992, p.1) was one of the first on the subject in a mainstream publication). Since it is linked to the university's writing programme, a steady flow of contributors is also guaranteed.

The first "room", i.e.the first page readers read on their screen when they visit the hotel, is the foyer, and from there they can choose to go into many different rooms and areas of the hotel like the guest rooms, the bar, staff rooms etc., in each of which different stories about different people can be found, sometimes linked to stories in other rooms, sometimes independent.

(Hypertext Hotel (currently under reconstruction) at: http;//www.update.ch/beluga/hotel.html)

4.6.1: The Role of the Editor

The editorial policies of some collaborative projects have already been outlined above, others use similar strategies: in print, contributions are collected and edited retrospectively, in electronic text, the editing is ongoing, eMail contributions are vetted by an editor / editorial board and continuously added to the work.

SPIELZEUGLAND, a German fiction project is an interesting example of how the need for editorial intervention was gradually realised by the initiators. While in the initial press release Dietmar Karlowski and Lars Zinner say that

> [f]este Rahmenbedingungen für Einsendungen sind nicht vorhanden [...] Alle Beiträge sollten einen sichtbaren Bezug zu den Personen oder zur Handlung von SPIELZEUGLAND haben, da sich das Projekt nicht als Verknüpfungsmultiplikator von diversem Datenmüll des Internets versteht. Sollten sich Bedingungen einstellen, die Auswahlkriterien erforderlich machen, werden sie publik gemacht.[123]

In later descriptions, however, their editorial interventions appear as much stricter; contributions are first collected, integrated in the network and a reworked version of the complete text is published each month.

> Wir werden den Text monatlich neu editieren, mit allen Ergänzungen, Veränderungsvorschlägen, Erweiterungen, Nebengeschichten und -schauplätzen etc., die du uns schickst. [...] Sei nicht enttäuscht, wenn etwas nicht sofort oder nicht ganz wortgetreu erscheint. Wir möchten uns die redaktionelle Arbeit an den Texten, die uns über e-mail geschickt werden können, vorbehalten, um eine gewisse Stringenz der Gesamtnovelle zu gewährleisten.[124]

In their study *Singular Texts / Multiple Authors* Lisa Ede and Andrea Lunsford study non-literary forms of collaboration and stress the importance of an organisational framework in which the writing can take place[125], and the great emphasis put in their case studies on retrospective editing, i.e. the process of producing a rounded, coherent document after the individual contributions were collected, a process which would sometimes take more

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[123] http://www-public.Oz.uni-duesseldorf.de/~karlowsk/spiel.html (19/3/1998).

[124] http://www-public.Oz.uni-duesseldorf.de/~karlowsk/spiel.html (19/3/1998).

[125] "Our survey results suggest that writing groups use such patterns frequently, though hardly anyone had a name for it. In fact, some told us they realized that they were following set or preestablished organizational patterns only after completing our survey, vividly demonstrating the principle that what lacks a name, we often simply do not recognize. Others [...] said having such a pattern was indispensable to success and that following an 'ineffective' organizational pattern could produce 'disastrous effects'. Our second survey results confirmed these responses: 72 percent of these writers said their group followed a set organizational plan. More importantly, they perceived the plan as necessary and helpful: 95 percent found its use productive or very productive. *We conclude, then, that collaborative efforts need to be carefully organised or orchestrated - a conclusion that our interviews bring dramatically to life.*" (my italics)

Lisa Ede and Andrea Lunsford, *Singular Texts/Plural Authors: Perspectives on Collaborative Writing* (Carbondale and Edwardsville: Southern Illinois University Press, 1990), p.64.

time than the initial writing process. Though their work focuses on collaborative writing in the workplace and the classroom, where far less emphasis is put on individual styles and the 'singular voice' of a text, these observations are equally valid for literary collaborations and confirm again the need for an organised editorial process.

The editorial task, is, however, neither an easy nor a uncontroversial one: the more authors contribute to a literary collaboration, the more 'multiple' the voices become, the greater the need for an editor. At the same time, though, the bigger and more complex a work becomes, the more difficult the retrospective editing to achieve a certain degree of macrolevel coherence, which is necessary to ensure accessibility and further contributions, becomes.

Not only is the role of the editor a difficult one in practice, but it is also a controversial one on the theoretical level of hypertext / etext theory. One of the aims of 'constructive' hypertexts (of electronic publishing and of collaborative literature projects) is, if not to break down boundaries between 'author ' and 'reader', at least to question the concepts, facilitate and encourage the shift from one role to another, and to give voice to writers who would otherwise never be heard or have never considered themselves as authors; the aim is "at least in some degree, a flattening of hierarchies and a revision or dissemination of authority"[126].

The editor therefore occupies a curious position in this concept. S/he is a necessary facilitator, but can also be an unwanted filter, a homogenizer of the multiple voices that in the ideal collaboration are free to interact with each other.The highly theorized move into a new medium, though it certainly opens up the scope and the ease of collaboration, is not free of contradictions between the theoretical ideal and the actual experiences in practice, both in the alternative publishing ventures and in the collaborative writing projects.The latter do, however, represent an interesting use of electronic text and the internet and open up, at least potentially, possibilities for active contributions, maintain a spontaneous playfulness and come a step closer to the reader-can-turn-author ideal than the exploratory games / hypertext discussed in the previous chapter. I would therefore

[126] Stuart Moulthrop, "No War Machine", at: http://www.ubalt.edu/www/ygcla/sam/essays/war_machine.html (26/8/1996).

fully agree with Petra Ahne and Monika Scheele, who proposed in a radio programme on the topic of hyperfiction that collaborative projects on the net

> lassen eher vermuten, wo sich Hypertext für literarisch-verspielte Zwecke bewähren könnte.[127]

[127] Petra Ahne und Monika Scheele: "Hyperfiction", Sendung Literatur und Computer, Dahlemer Divan (student radio programme, 11.2.1996) transcript available at: http://userpage.fu-berlin.de/~avl/diwan_11_02_96_hyper.html.

Chapter 5: Computer-Generated Literature

A chapter on computer-generated writing seems, at first glance, out of place in a thesis which has so far focused on hypertext and other forms of electronic writing, especially since it shifts the emphasis from the use of the computer for the organisation, presentation and consumption of the literary texts to the use of the machine for their creation.

A closer look at attempts at computer-generated poetry and especially computer-generated prose (and I will outline the reasons why I will concentrate on prose generation later) will however show that they can be looked at as both a logical continuation and in other respects as an opposition development to other forms of electronic writing such as hypertext fiction and collaborative projects, and that their study can enhance an understanding of the latter. Experiments in computer-generated writing take up similar fundamental questions about the nature and the construction of concepts such as the structure of (literary) texts and writing and reading processes, focusing especially on the (absent) authorial figure, the question of what constitutes a literary text, the problem of textual meaning without underlying authorial intention, and the way this meaning is constructed, i.e. sense is made by readers in the reading process of a non-sensical text. These experiments can, however, especially in those cases which go beyond simply imitating human literary output, be more radical, less optimistically constructive but more cynically exposing than hypertext fiction, which, despite its affinities to postmodern theories, is based on the fundamental belief that new valuable forms of writing with the computer can be found.

One of the similarities between electronically presented and electronically created

literature is that they both challenge the traditional opposition between computer and literature, one objective, the other subjective; one dealing with facts and logical truth, the other with imagination and creative truths; one cold, functional and systematic, the other inspirational, creative and intuitive, one non-sensory, the other, especially poetry "the expression of a deeply felt emotion or idea"[1] - a continuation of the "two cultures" dichotomy suggested to exist between science and humanities[2]. But more than that, computer-generated writing, even more than hypertext fiction, challenges and questions fundamental beliefs of what literature is or should be in a paper as well as an electronic environment.

Computer technology is frequently used as a tool for literary research and has from a very early stage been employed to aid either with very laborious or otherwise impossible tasks such the compilation of concordances, storage of large amounts of textual data, stylistic analyses, clarification of contested authorship or prosody. Once a text is entered, frequency searches for particular words or phrases and their context or other searching and sorting operations can be performed with great ease. Programs, such as The Oxford Concordance Programme (OCP) or the WordCruncher for Windows are powerful tools for providing information and raw data for further literary analysis[3] ; they aid the study of literary texts, yet do not attempt their creation.

Computers are also used as an aid for authors, most of whom have abandoned pen and paper or the typewriter in favour of word processing packages. Changes in writing technology have a complex effect on writing and reading processes and general cultural attitudes and values towards writing and knowledge, some of which were outlined in previous chapters and will be examined further at a later stage. From very early on, with the shift from an oral to a written culture, and enforced by technological advances, increasing mechanisation and professionalisation of the publishing industry, authors became more and more detached from their work. The act of consumption is spatially

[1] Kern, "GOTO Poetry, *Perspectives in Computing*, vol.3, no.3 (October 1983), 44-52. p.47

[2] A divide most famously suggested by C.P.Snow in his essay *The Two Cultures* (Cambridge: Cambridge University Press, 1993, first published 1959).

[3] For a comprehensive list of Text Analysis Tools see the Oxford based CTI Textual Studies Unit's webpage at: `http://info.ox.ac.uk/ctitext/resguide`. For further discussions of the computer as a tool for literary studies see David Miall's essay "Representing and Interpreting Literature by Computer", at: `http://www.ualberta.ca/~dmiall/complit.htm` (no page numbers) (12/8/98) or his book *Humanities and the Computer* (Oxford: Clarendon Press, 1990).

and temporally independent from the act of creating, and the physical presence of an author, which is a necessity in oral narratives, remnant in a manuscript culture[4] but almost absent in a printed / digital text, changes to a conceptual presence. The computer can reverse this process and can, by giving authors greater control over the presentation and distribution of their work, make the conceptual presence more tangible.

It is this conceptual presence, i.e. the knowledge that behind every text, however anonymous looking, an author has worked on its construction, that computer-generated writing is challenging. Language always already pre-exists any author, s/he selects and combines from the pool of all possible combinations within the system to create his/her work. If the computer is used merely to store and arrange these choices, the fundamental processes and hierarchies, i.e. the computer as subordinate tool to the dominant creative process of the author, have not been changed, which is the case even in hypertext fiction, though it relies heavily on the computer. Computer-generated writing goes further in that it lets the computer take over these processes of selection and combination, procedures we tend think of in the context of literature as fundamentally human and as the building blocks of literary creativity.

5.1 : Prose vs. Poetry

Throughout this thesis, I have focused on prose rather than poetry. The reason for this is not that on-screen poetry experiments do not exist - plenty of poetry websites and experiments in hypertext, visual and kinetic electronic poetry exist[5] and are on the avant-garde of electronic literature projects - but that fiction poses different, and in the context of my argument more relevant, challenges to both authors and readers, such as for example questions of non-linearity and coherence. Similarly does the discussion of computer-generated writing in this chapter not focus on the many available poetry generators, but on the prose generators, of which there are, for a number of reasons,

[4] In an introductory essay to the exhibition *The Dual Muse: The Writer as Artist / The Artist as Writer*, which explores the work of authors/artist who use both textual and visual modes of expression, William H. Gass uses Rainer Maria Rilke as an example for the belief that a manuscript would embody the artist's identity better than a printed text. "When Rainer Maria Rilke", he writes, "completed a poem, he sent copies to his friends in his own hand, for it was in that hand the poem was embodied, not in the impress of any indifferently repetitive machine." (William H. Gass, "La Maison d'en face or That Other Art", in: *The Dual Muse: The Writer As Artist,The Artist as Writer*, exhibition catalogue (Amsterdam, Philadelphia: John Benjamins Publishing, 1997), p.28.

[5] A good starting point for poetry on the Web is the Electronic Poetry Centre at: `http://www.buffalo.edu/epc` (12/8/98); two poets who work on the internet and whose work is one the forefront of exploring the medium of electronic text are John Cayley, whose project *Indra's Net (a cybertextual project)* can be found at: `www.demon.co.uk/eastfield/in/inhome.html` (12/8/98), and Jim Rosenberg, whose homepage is at: `http://www.well.com/users/jer` (12/8/98).

fewer.

One of the reasons why poetry rather than prose is chosen by Artificial Intelligence researchers is outlined by Charles O. Hartman, who describes poetry in his book *Virtual Muse* as "the ultimate touchstone of intelligence"[6]. Poetry has great prestige as a symbol of human culture, is somehow the crown jewel of literary achievement and in its complexity and subtlety is perceived as so ultimately human, that, unlike prose which is more formulaic and less 'intensive', its perfect imitation could be regarded as the highest AI achievement.

Status, however, is not the only reason for the choice of the poetry format; coherent and readable prose is very difficult to programme and to achieve, and for reasons similar to those that have made poetry the format of choice for many radical literary experiments[7], poetry is preferred. Poetry relies on juxtaposition, whereas fiction requires a degree of development and coherence, if not on the level of narrative, at least on the level of syntax. Very radical disruption and juxtaposition can be tolerated in poetry. Due to its relative shortness the reader's attention and participation can be captured much more intensely, especially since readers are generally prepared to spend a longer time on a page of poetry or an individual poem than on a page of prose. Readers of modern poetry are also used to a freer, looser structure, as well as to identifying a poem 'as a poem' not by any inherent characteristics, but through outside signals, such as rhyming line-endings, a certain arrangement on the page, a typography with uneven line lengths or simply by the fact that it is labelled poetry - all features which can be reproduced and imitated easily by the computer. Furthermore there is a long tradition of nonsense poetry and, as Kevin McKean has pointed out, less of an expectation that what is presented in a poem or as a poem is necessarily going to make (immediate) sense. Quoting Louis Milic, a Professor of English and one of the early researchers in computer-generated literature, McKean points out:

> "The question was," Milic says, "why would a sentence generated by a computer be mistaken for poetry?" The answer, he reasoned, must be that many people are used to poems not making sense.

[6] Charles O. Hartman, *Virtual Muse: Experiments in Computer Poetry* (Hanover and London: Wesleyan University Press, 1996), p.1.

[7] And I am thinking here especially of the radical literary avant-garde of this century (Dada, Expressionism, Futurism, Concrete Poetry) which almost exclusively focus on or are best known for their work with and rethinking of the poetic form.

> Compare the following two poetic excerpts:
>
> **1**
>
> Because the pleasure-bird whistles after the hot wires,
> Shall the blind horse sing sweeter?
>
> **2**
>
> What does she put four whistles beside heated rugs for?
>
> The first is from [a poem] by Dylan Thomas; the second was written by a computer. True, Thomas's lines are more melodic and haunting. But isolated from context, they make just as little sense as the computer's odd question[8] .

Generally speaking prose requires a greater coherence and greater motivations of characters and their actions both on the micro- and the macrolevel of the narrative. In consequence, in order to write a workable prose generation program one has to take into account not only the syntax of language, but also the syntax of prose; its narratological structures need to be identified, reduced to formulae and taught to the computer. The first task is difficult enough and requires a careful analysis of the language used and an input dictionary free of ambiguities and irregularities, as Hartman experienced when he attempted to compile a dictionary from the five thousand most common words while working on his MacProse project:

> Some good words, especially verbs, have especially tricky syntactical implications and were best quietly omitted. Urge requires a complicated object ("urge A to do B"). Many verbs (admit, prove, insist) take a "that" construction, which isn't simple to put into grammar. Alike is usually the complement of a plural copula ("the brothers are alike"); to use it I would have to build in special flags that would keep that whole construction "in mind" until completed. So I dumped those.[9]

The second element, the 'syntax of prose', is even more difficult to describe and qualify, and it is in this context that researchers of Artificial Intelligence (AI) have shown a great interest in the qualities of oral literature, whose "formulaic, repetitive and cliched"[10] nature makes it ideally suited for computation, and have used formalist / narratologist studies of literature such as Propp's study of the folktale as a background and a starting point for several experiments in computer generation of prose, most prominently TALE-SPIN. TALE-SPIN will be examined here further as an example for the area of AI research whose aim it is to, through analysis and classification of narrative structures/ behaviours, achieve a level of sophistication of computer programs so high that they would

[8] Kevin McKean, "Computers, Fiction, and Poetry", *BYTE* (July 1982), pp.50-53 (pp.50-51).

[9] Hartman, *Virtual Muse,* p.81. Alfred Kern is equally selective in the choice of words for his poetry generator, but selects on the basis of simplicity and plausibility rather than syntax. In early attempts, he argues, "the lines oozed with words such as luminescence and evanescence - the sort of sophomoric poetecising that must be discouraged no matter who or what composes the verse" - according to Kern the most fancy word in his program was "evergreen" (Kern, "GOTO Poetry", p.49).

[10] Marie-Laure Ryan, *Possible Worlds, Artificial Intelligence and Narrative Theory* (Bloomington and Indianapolis: Indiana University Press, 1991), p.244.

eventually pass the Turing Test[11], the benchmark of AI research, i.e. would be able to produce narratives indistinguishable from human creative output.

5.2: The Computer as Author

5.2.1:TALE-SPIN

> *1) Once upon a time, there were two bears named Jack and Joe, and a bee named Sam. Jack was very friendly with Sam but very competitive with Joe, who was a dishonest bear. One day, Jack was hungry. He knew that Sam Bee had some honey and that he might be able to persuade Sam to give him some. He walked from his cave, down the mountain trail, across the valley, over the bridge, to the oak tree where Sam Bee lived. Jack asked Sam for some honey. Sam gave him some. Then Joe Bear walked over to the oak tree and saw Jack Bear holding the honey. He thought that he might get the honey if Jack put it down, so he told him that he didn't think Jack could run very fast. Jack accepted this challenge and decided to run. He put down the honey and ran over the bridge and across the valley. Joe picked up the honey and went home.*[12]
>
> *2) Joe Bear was hungry. He asked Irving Bird where some honey was. Irving refused to tell him, so Joe offered to bring him a worm if he'd tell him where some honey was. Irving agreed. But Joe didn't know where any worms were, so he asked Irving, who refused to say. So Joe offered to bring him a worm if he'd tell him where a worm was. Irving agreed. But Joe didn't know where any worms were, so he asked Irving, who refused to say. So Joe offered to bring him a worm if he'd tell him where a worm was.....*[13]

Created in 1976 by James Meehan, TALE-SPIN develops stories based on folk tales and especially fables from a set of pre-defined characters, settings and problems. Settings for the program to choose from include mountains, forests, rivers and caves, humanised animal characters have not only associated databases of physical and moral characteristics (has beak, can fly, is (dis)honest) but also possess names such as George Ant, Sam Bee or Wilma Bird. More importantly, a list of goals and motivations with appropriate actions for their satisfaction is programmed in order to re-produce basic causal relationships and storylines: A is thirsty -> A goes to river -> A drinks water -> A is no longer thirsty. Other such relationships include hunger -> find food, sleepiness -> sleep or danger/accident -> rescue. Conflicting goals by different characters are kept track of, and the program will

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[11] The so-called Turing Test (Alan Turing referred to it as the imitation game) is described in an essay from 1950 entitled "Can a Machine Think". Turing describes a set-up in which an interrogator situated in one room can ask any question s/he likes to two players, A and B, who are both hidden from view in other rooms and communicate with the interrogator via an impersonal means (teletype). In Turing's idea, one of the players would be a computer and it would be the interrogator's task to find out which player it is. The machine passes the Turing Test, i.e. proves it can imitate human intelligence, if it can answer well enough to make a distinction impossible for the interrogator. For a further discussion of the Turing Test and attempts in AI to pass it see: David J. Bolter, *Turing's Man*, p.191-193.

[12] A fable created by the TALE-SPIN program, quoted in McKean, "Computers, Fiction, and Poetry", *BYTE* (July 1982), pp.50-53 (p.52). This version of the story is not the actual TALE-SPIN output, but already a version translated by Meehan "into more conventional English form the choppy sentences of the original".

[13] A TALE-SPIN story in a loop, quoted in Janet Murray, *Hamlet on the Holodeck* (New York, London, Toronto, Sydney, Singapore: The Free Press, 1997), p.200.

make an attempt to solve both.

While some of the storylines generated in this way get caught up in loops (see example 2 above), many of them are plausible and coherent, yet on the whole, despite their internal logic, they display a number of overall unsatisfactory shortcomings. Two of these are identified and critiqued in Marie-Laure Ryan's study *Possible Worlds, Artificial Intelligence and Narrative Theory*, a study which, while critical of individual projects, is overall very optimistic about the possibility of computer-generated literature. The first criticism concerns the over-efficiency of story-generators such as TALE-SPIN, which tend to opt for the most practical and least complicated solution for any given problem, unless obstacles, accidents, 'coincidences' or conflicting motivations by other protagonists are programmed in by the user. "To produce plans of intrinsic narrative value," Ryan suggests, "a program would need to follow guidelines such as: avoid standard solutions, favor cunning over violence, try to kill two birds with one stone."[14]

A second criticism concerns the "dubious aesthetic quality" of the narratives which is a result of the lack of temporal flexibility of the narratives. While already noticeable in TALE-SPIN's fables, the lack of suspense due to the strictly chronological organisation of the narrative events is even more noticeable in programs which use genres other than the fable as their raw material; Sheldon's program *Mystery*, for example, a story generator based on a traditional English murder mystery displays this weakness strongly by favouring plot (the temporal sequence of events) over story (their narration). Computer-generated stories also tend to favour action over description, leading to the impression of a story skeleton rather than a fully realised narrative -an effect very similar to that of hypertext fiction where, due to the fragmented and discrete nature of the individual nodes these tend to function as kernels, as actions which generate alternatives and take the action forward, rather than as non-decisive moments, or catalysts[15].

[14] Marie-Laure Ryan, *Possible Worlds, Artificial Intelligence and Narrative Theory* (Bloomington and Indianapolis: Indiana University Press, 1991), p.244. Ryan, who does believe in the computability of narrative structures and in that the shortcomings outlined above can be overcome eventually by an improved algorithm, suggests an alternative protocol she believes might create more narrative interest - in this case by making sure that the antagonist and not the main protagonist is the winner: "(1)Create a protagonist and give him a goal. (2)Create an antagonist and give him a goal incompatible with the goal of the protagonist. (3)Create a plan for the goal of the protagonist. (4)Create an event which will make the antagonist aware of the plan of the protagonist. (5)Have the antagonist create an interfering plan. (6)Execute the plan of the protagonist up to the point where the antagonist is scheduled to take action. (7)Execute the plan of the antagonist. (ibid, p.244).

[15] I take these terms from Rimmon-Kenan - for a further discussion see Shlomith Rimmon-Kenan, *Narrative Fiction: Contemporary Poetics* (London and New York: Routledge, 1983), p.16.

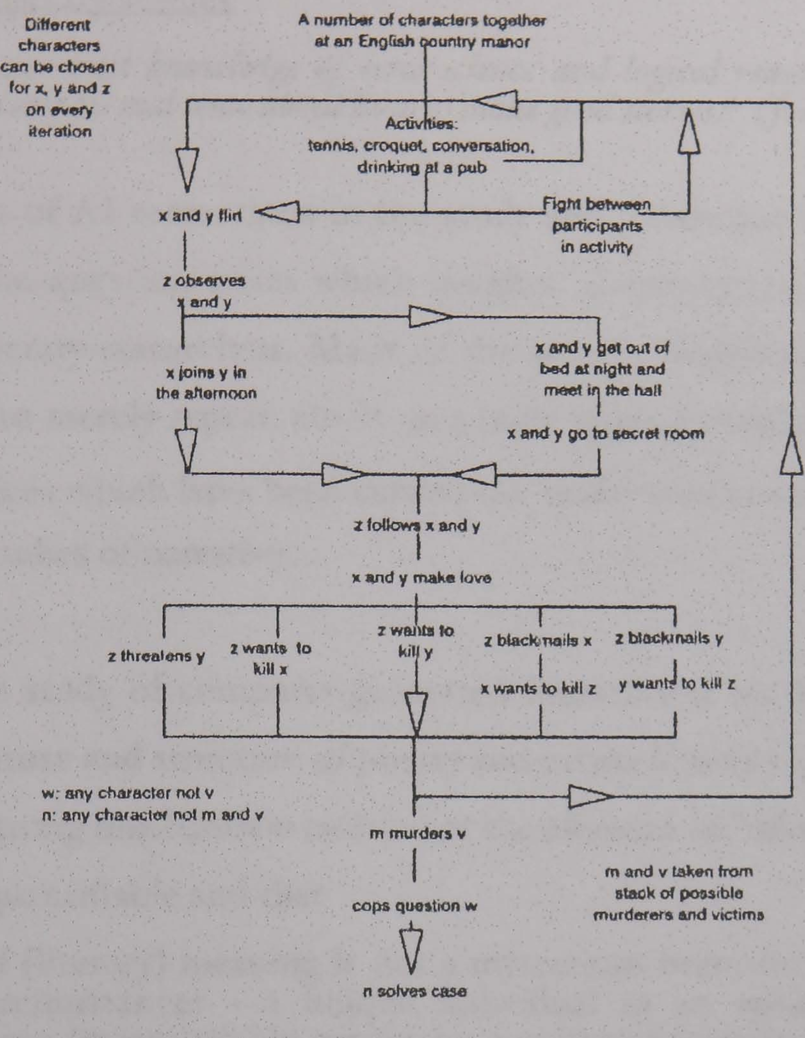

Figure 44
Flow-chart for the generation of mystery stories
(Adapted from Klein et al. 1979)

[16]

The third, and I would argue most fundamental and far-reaching, criticism is one that Meehan admits to himself, namely the lack of overall purpose of the story. Though on the microstructure the individual story elements are sufficiently logical and motivated in themselves, this motivation is lacking on the macrostructure, which, even though it makes perfect sense as a structure, is not motivated as a narrative. Meehan observes:

> There was no overall goal as to what the story would be about. It might be filled with perfectly rational behaviour, but it might not be particularly interesting, just as what you and I do in a day may be rational, but may not constitute a story.[17]

A fact which especially for a genre such as fables, which are based on a pedagogical motivation and have a moral to tell, raises major questions about intentionality of narration and the position the (non)existent author occupies.

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[16] Ryan is equally optimistic that this problem could be solved by a better program, one which would go over the narrative, once created, for a second time to select an order of the narrative elements, which guarantees greater suspense (Ryan, *Possible Worlds, Artificial Intelligence and Narrative Theory*. p.242).
[17] McKean, "Computers, Fiction and Poetry", p.52.

5.2.2:Question for literary studies

> *In contrast to our vast knowledge of how science and logical reasoning proceeds, we know precious little in any formal sense about how to make good stories.*[18] *(Jerome Bruner)*

While the interest of AI researchers in the study and generation of (prose) narratives is understandable, the question arises which insights, if any, experiments such as TALE-SPIN can offer literary researchers. Many of the areas it examines and analyses it carries out seem after all to merely repeat, albeit on a more sophisticated level, research into the structure of narratives which have been carried out under similar assumptions in formalist and structuralist studies of narrative.

One motif for the study of computer-generated literature is the hope to obtain further insight into the nature and structure of poetry and prose; Ryan's suggestions, for example, are based on the strong mechanistic belief that the element of "tellability" of any narrative is qualifiable and quantifiable and that

> the creation of [literary] meaning is not a mysterious brainstorm caused by a random meeting of circumstances - a unique individual in an ephemeral state of mind, nurtured to some immeasurable extent by a culture whose boundaries remain fuzzy, and bringing to the text a deeply private experience of the world - but the predictable output of definable processes operating on a variable input.[19]

Milic exhibits a less optimistic attitude to the ability of the computer to imitate creative acts of humans and believes that through work on prose generators and their outputs one can not only learn about literary structures (Ryan's argument) but more importantly, through the observation of the shortcomings of those generators, obtain a greater appreciation of the work of authors. He argues that his work on *Erato*, a poetry program he created, "doesn't weaken our appreciation for poets. On the contrary, it deepens it because we see how much easier they do what the programmer and machine are trying to do."[20]

Far from being a supporter of a romantic vision of the creative genius (he does believe that the computer could eventually achieve the sophistication of a human creator) he does acknowledge that factors which are very difficult to compute do play a role in the writing process, some of which he hopes to discover and pinpoint further through his work on

[18] Jerome Bruner, *Actual Minds, Possible Worlds* (Cambridge, MA and London: Harvard UP, 1986), p.14.
[19] Ryan, *Possible Worlds*, p.5-6. Which, in consequence, turns literary studies into an a-historical and highly formalist discipline.
[20] McKean, "Computers, Fiction and Poetry", p.51.

the fiction programs.

The main problem with both Ryan's and Meehan's viewpoint and with experiments such as TALE-SPIN and Mystery is that their underlying view of literature is a rather reductive, a-historical and mechanistic one and is furthermore inevitably text-centred, i.e. based on the belief that literary characteristics are a) inherent in texts and can be extracted from them and that b) a computer can be used to then imitate human literary production.

Projects like this fail both practically and theoretically; practically because they are based on the imitation of human language processes, but disappoint because they fail to achieve a similar degree of sophistication. To compare the creative literary output of the computer with that of a human author, is, however, not a fair comparison, as Hartman has pointed out, since "[t]he imitation game is hard to play on human turf, language"[21]. But rather than seeing this as a victory, as a triumph of the human mind over the machine, this insight should be used as an incentive to shift the goal post and move away from imitation and from a text-centred approach of early text-generating programs towards one that is more interested in the reader.

Imitation aims at a reproduction of known literary forms and a confirmation of expectations and reading habits. The theoretical implications of computer-generated writing can however be more insightful and far-reaching if the computer is encouraged to produce text which is different from traditional human output and challenges forms, expectations and habits. Putting the emphasis on the reaction to and the perception of this output then forces readers to reflect on the processes through which literature and literary meaning is constructed and allows for a more contextual, historical approach to the question of "What is Literature?".

Moreover, the results of such imitative pursuits will not be very interesting to read as works of literature since "The more accurately the computer mimics human speech, the more ordinary it becomes" argues Hartman[22]. The litmus test of imitative computer-generative writing is how well it manages to reproduce any given

[21] Hartman, *Virtual Muse*, p.72.
[22] Hartman, *Virtual Muse*, p.94.

literary form or genre, i.e. how indistinguishable it is from texts of the human author. Which makes the result of the attempts often far from novel and exciting, but interesting only in the context of their production.

5.2.3:Racter

In his essay, "How to recognise a poem when you see one"[23], Stanley Fish argues that any kind of writing - in his experiment a list of names which happened to have remained on the blackboard from an unrelated teaching session prior to his literature class - will be read as poetry if labelled so. He proposes that there is nothing inherent in the text that turns it into poetry, but merely a set of conventions and the extra-textual cultural context, which makes the reader interpret a text as a poem at a given point in time. The same can be argued for prose, and programs such as the *Racter* program, which move at least partly away from the imitative approach, can help us discovering this anew in a different context.

Racter, a program developed by William Chamberlain and Thomas Etter in the early 1980s, *does* attempt to imitate human output and does so disconcertingly well, but, unlike other programs, it does not try to hide the fact that it is a computer program. Short for 'raconteur', it is a program capable of producing conversations, various forms of poetry, prose and even Shakespearean drama, and has published under its name a small book entitled *The Policeman's Beard is Half-Constructed*[24], in which some of its creations are collected and which has attracted a lot of interest[25] and triggered interesting debates, and has made it one of the most popular and notorious programs for the generation of literary texts.

The book contains gems such as

> Bill sings to Sarah. Sarah sings to Bill. Perhaps they will do other dangerous things together. They may eat lamb or stroke each other. They may chant of their difficulties and their happiness. They have love but they also have typewriters. That is

[23] Stanley Fish, "How to recognise a poem when you see one", in: *Is There a Text in This Class?* (London: Harvard University Press, 1980), pp.322-327.

[24] Racter, *The Policeman's Beard is Half-Constructed,* (New York: Warner Books, 1984); the program is still available, see the Racter FAQ for more information.

[25] Hartman, *Virtual Muse: Experiments in Computer Poetry*, p.2; Hardison Jr., O.B., *Disappearing Through the Skylight: Culture and Technology in the Twentieth Century* (New York: Viking Penguin, 1989), pp.268-269; Jorn Barger, "The Policeman's Beard Was Largely Prefab! Racter FAQ" at: http://www.mcs.net/~jorn/html/ai/racterfaq.html (25/8/96); Josef Ernst, "Computer Poetry: An Act of Disinterested Communication", *New Literary History*, vol.23, no.2 (1992), 451-465; James Ledstetter, "Racter, the Poetic Computer: The Case of the Disappearing Author, *The New Republic*, vol.195, no.8 (11/18 August 1986), 39-41.

interesting.[26]

The appeal of extracts like this is obvious. Non-sequiturs and the combination of the profound (dangerous things, love) and the mundane (eating lamb, typewriter) as well as the teasing openness to a sensical interpretation without really making sense, makes the paragraph appear like thoughts of a slightly alien, yet interesting and similar mind. Other attempts, such as "Swinburne had tried to versify while softness was rampant, so of course softness is what all poets wish when they exorcise language", make less immediate sense, but are still grammatically correct and intriguingly complex[27], complex enough to trigger sense making and interpretation processes in readers.

This is the interesting aspect of programs such as Racter: while it uses forms and conventions of 'human' literature, it fills them with its own logic and raises questions not about whether or not the computer can imitate narrative structures well enough to be mistaken for the human narrator, but focuses instead on the reader's reaction to overtly computer-generated texts, and the processes through which sense is read into these texts.

Terms like 'sense' or literary 'meaning' are extremely difficult to define and qualify, but I would like to take up Jonathan Culler's tentative suggestion and read meaning as something generally perceived[28] as more stable, more inherent in the text, a property put into the text by someone at the moment of writing, whereas sense is more something the reader's produce in the act of reading, a process, hence the phrase 'making sense of something'. Culler prefers the second term, because it

> links meaning with an active, creative process and thus frees us from the [...] postulate which makes interpretation a guilt-ridden and nostalgic attempt to recover meaning which time and the human condition have obscured[29].

However, whichever terminology is chosen, and I agree with Culler's preference of the more active, process-oriented "sense", the element of intention, i.e. how and especially

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[26] quoted in Hartman, *Virtual Muse*, p.2.

[27] One of Racter's (or better Racter's programmers) strategies to give the illusion of coherence is the repetition of certain key-phrases, here "softness".

[28] It has to be pointed out here that the emphasis is on "general perception". Neither definition holds up to close philosophical scrutiny, and a distinction between a more passive text-focused meaning and an active reader-centred "sense" is merely based on general language usage (Jonathan Culler, "Making Sense", *Twentieth Century Studies*, no.2 (1974), pp.27-36.

[29] Culler, "Making Sense", p.29.

why the initial reading material came into existence remains untouched.

> *To respond freely to a human poet is one thing; to weep at the lines of a machine one has considered to be only a number cruncher is quite another. (Alfred Kern)*[30]

Questions about meaning/sense and theoretical undermining of concepts of a stable meaning situated within a text which readers can retrieve either correctly or incorrectly have been taken up in literary theory before, and computer-generated writing adds an interesting practical facet to the debate. Unlike TALE-SPIN, whose failure to achieve its aim of human imitation in a satisfactory manner only strengthens the belief in the creative human mind and the meaningful communication it can create through literature, *Racter* triggers similar effects to nonsense or chance poetry and renders concepts not only of meaning and sense, but also of intention very slippery indeed.

What is different in the case of *Racter* from other genres such as nonsense poetry, where similar questions are put in the foreground, is the explicit knowledge that, at least at first glance, there is no easily identifiable author figure behind Racter's output; it is only accredited to a computer program. How can we sympathise with the emotion in a text, if the 'creator' of this text does not have the ability to feel them? How can we laugh about the absurdity of a text if its 'creator' has no concept of absurdity or humour? How can we make sense of a text if its 'creator' has no intentions?

Unlike hypertext fiction, which attempts to shift some of the responsibility for the construction of the narrative and of narrative meaning to the reader, but does so on a theoretical level without always succeeding to translate it into a deconstruction of authorial power on the level of practice, and also unlike collaborative projects, which diffuse and multiply authorial voices without negating them, computer generated texts take notions of the disappearance of the author onto an open, immediate and applied level. When confronted with texts which have a computer program as their attributed author, readers are confronted with a thoughtprovoking alternative to the human author-reader interaction; when faced with what seems to be the absence of intentionality of the creator of the text read, the "lack of real intelligence", that Hartman ascribes to the computer, the lack of "narrative competence", as Ryan puts in, the process of sense-making seems to shift by default away from the author figure as sense-giver and from the text as sense-

[30] Alfred Kern, "GOTO Poetry", *Perspectives in Computing*, vol.3, no.3 (October 1983), pp. 44-52 (p.47).

bearer, exclusively to the reader as sense-maker.

Notions such as this arguably tie in extremely well with many of the suggestions brought forward by post-structuralist thought, and though most of the practical research into computer-generated writing has been initiated by researchers in Artificial Intelligence and not in literary studies, an obvious interest in the results and in the theoretical importance of the project has led literary theorist to take a keen interest into computer-generated writing.

This convergence of literary theory and scientific research, or more specifically superimposition of deconstruction on computer-generated writing, can be observed for example in an essay by the writer James Ledstetter, entitled "Racter, The Poetic Computer"[31] . After outlining Derrida's notion of the "metaphysics of presence", summarising Foucault's "What is an author?" and providing a link to Dada nonsense poetry, Ledstetter comes essentially to the conclusion outlined above when he states that

> Despite decades of more "radical" analysis by semioticians and deconstructionists, readers and reviewers hold fast to essentially 19th-century views about authors, texts and meaning. [...] Consider the possibility [of Racter] for undermining these assumptions

and argues later that

> Racter, having mastered the fundamental syntactical rules of English, has laid bare the only raw materials needed to produce a kind of literature. All meaning is provided by the reader.[32]

But can we really call Racter's work "the only deconstructive text"[33]? Ledstetter's argument, and that of others, such as Josef Ernst who comes to less optimistic conclusions and evaluates Racter's work as deeply unhumanistic and dangerous[34], are based on the assumption that Racter's work specifically, but also computer-generated fiction in general, is truly an <u>authorless</u> text - which is precisely where the flaw of the argument lies and the parallels between the (literary) theory and the actual (AI) experiments fail to work.

[31] James Ledstetter, "Racter, the Poetic Computer: The Case of the Disappearing Author, *The New Republic*, vol.195, no.8 (11/18 August 1986), 39-41.
[32] Ledstetter, "Racter", p.39.
[33] Ledstetter, "Racter", p.40.
[34] Ernst argues that an author who sorts through computer output is reduced to alienated work and becomes no more creative than an assembly line worker. Though he specifically hinges his criticism on Racter, he generally accuses experiments in computer-generated writing in beginning and ending in submission to the machine. (Josef Ernst, "Computer Poetry: An Act of Disinterested Communication", *New Literary History*, vol.23, no.2 (1992), 451-465.)

"Once it is running, Racter needs no input from the outside world. It's just cooking for itself" (Richard Chamberlain)[35]

The key phrase here is the first half of the sentence "once it is running". Once it is running, a program like Racter or TALE-SPIN can produce an endless scroll of more or less sensical output on the screen and appear to be authorless, but to get to that point, a large amount of very human authoring /programming needs to go into the structures, templates and algorithms that enable the productive ease.

It is not the program Racter which has mastered the basics of the English syntax, but the programmers behind it, who, drawing on extensive research in linguistics, have extracted and turned into formulae the basic combinatory rules of English; it is the programmers who selected a range of vocabulary fitting these structures and who created the templates used for the generation of text. Only after these operations can the program do its part and generate its - often surprising and 'sensible' - new combinations.

A closer look at the templates indeed takes away much of the astonishment about the results Racter can produce seemingly without very little outside intervention. Jorn Barger examines the question of templates in his essay "The Policeman's Beard Was Largely Prefab" and quotes some examples which give an interesting insight into the working of the program. A typical template available with the commercial version of the Imrac compiler, which allows users to create their own templates for Racter, would read

```
a %PEOPLE #
b >HERO*person[&P] >VILLAIN*person[&N] #
c $VILLAIN #RND3 bit robbed hit $HERO , #
d but $HERO just #RND3 smiled laughed shrugged . #
' new:
e $VILLAIN snarled >X=Saint,HERO "> $X , I presume <*. #
f "That's a !Y=VILLAIN;esque remark" replied $HERO .
g >X*person !Y=X,hoo
```

A template like this would then make Racter randomly select a Hero and a Villain from the People list, select one of the three verbs in lines c and d, and produce an outcome which might read like this:

[35] Ledstetter, "Racter", p.40.

```
Joseph Stalin robbed Mother Theresa,
but Mother Theresa just laughed.
Joseph Stalin snarled, "Saint Mother Theresa, I presume".
"That's a Joseph Stalinesque remark" replied Mother Theresa.
Jane Fonda hoo.
```

Barger goes as far as arguing that, despite claims to the contrary by Chamberlain and Etter, the output published by Racter in "The Policeman's Beard is Half Constructed" could only have been produced by using "elaborate boilerplate templates which are *not* included in the commercially available release of Racter"[36]. But even if this was not the case, the importance of the templates on the actual output by Racter is shown as being of great importance and introduces a large human element into the text production and makes arguments based around the 'authorless' qualities of computer-generated prose appear rather naive. Racter moves away from a purely imitative approach such as the one taken by TALE-SPIN; however, the author figure is still present in programs like Racter, though it is less obviously present and its role has changed from being the realiser of an individual expression to a developer of a structure, the individual realisation of which is left to the computer.

Ledstetter himself comes close to acknowledging this argument, when he states that

> a typical response to Racter's work [...] is to charge that it is not truly written by a computer. Somehow, we insist, without really understanding how it works, the poem is the product of the men who did the programming. The machine cannot think, the machine can not emote. The meaning must come from the programmers.[37]

What Jorn Barger wants to argue by emphasising the human input necessary to obtain Racter's results is, however, not that *meaning* is created by programmer, but that the framework in which the meaning can be created by the reader is still a human creation, while only the individual instances are produced *with the help* of the computer.

Theorists like Roland Barthes can ignore the actual existence of an author behind any text, because they lift the discussion onto a theoretical level and are concerned with the author as an idea, a concept, a function and not an actual physically existent human being

[36] Jorn Barger, "The Policeman's Beard Was Largely Prefab! Racter FAQ" at: http://www.mcs.net/~jorn/html/ai/racterfaq.html (25/8/96), no page numbers. The FAQ also gives an explanation of the above template.
[37] Ledstetter, "Racter", p.40.

(the existence of which he does not deny but rather deem unimportant for his argument). By applying notions of the authorless text too literally, arguments such as Ledstetter's undermine not only their own rationale, since an "author" in form of a programmer can still be identified, albeit with a different set of skills and intentions, but also undermine the power and importance of postmodernist deconstructions of traditional notions of authorship, authority and meaning.

5.3: The Computer as Collaborator

One can observe a long fascination of humans with the idea of machines that can not only help humans but imitate them and maybe dominate or replace them; the mythical Golem figure, the Sorcerer's apprentice, the Romantic fascination with automata and numerous science fiction stories about usually malign computer systems are only some of a great number of possible examples. Especially the computer frequently has human characteristics attributed to it - one speaks of the computer's "brain", "viruses" and artificial "intelligence" - which are at the same time both useful metaphors, as the try to explain very complex and abstract processes and give them an everyday context, and indicative of the anxiety and the perceived threat of this everyday but still mostly alien technology.

To attempt an imitation of a human activity such as the writing and reading of literature, and even the assumption that such an imitation is possible, presents not only an underestimation of the complexity of natural language, but also of literature and especially of sense making processes both on the side of the author and of the reader. And while *Racter* moves away from a goal of pure imitation and aims to instead shock and surprise by overtly stressing the computer's idiosyncrasies and reader's incapability to react to the *Racter* text with their traditional set of assumptions and familiar reaction processes, *Racter* swings to the opposite extreme to programs such as TALE-SPIN in that it does not, like TALE-SPIN want to hide the computer origin of its work, but on the contrary the human input behind its 'authorless' text.

It is more helpful, both for the general evaluation of computer technology and for its uses for the creation of literary texts to see the machine not so much as a contender for or

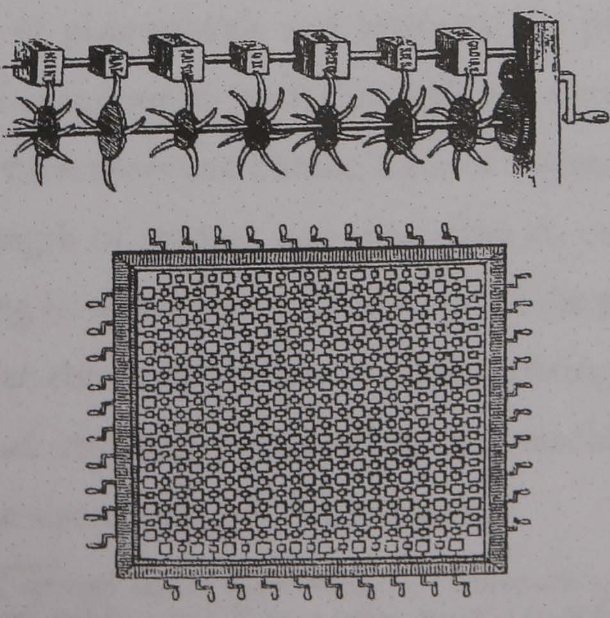
possible replacement of human creativity, but as a helping and augmenting[38] tool, and of computer-generated writing not as an activity solely performed by the machine, but as a collaboration between human author and computer.

Machines to help with activities such as the storing, arranging and combining of textual components have been on the wishlists of authors long before the computer. William Paulson quotes, for example, Walter Scott, who expresses in his introduction to *Betrothed* the desire for technological advances that may take over some of the work of the author. Unlike the darkly ironic description of the machine described by Swift in *Gulliver's Travel*[39], a machine that has replaced human intelligence in the creation of philosophical and scientific texts, Scott writes also ironically, yet not without a core of seriousness and in an era of increasing mechanisation in any walk of live with a great optimism about technology and the positive effects it can have on mankind. He suggests:

> that at the expense of a little mechanism some part of the labour of composing these novels might be saved by the use of steam. [...]. It is to be premised that this mechanical operation can only apply to those parts of the narrative which are at present composed out of commonplaces, such as the love-speeches of the hero, the description of the heroine's person, the moral observations of all sorts, and the distribution of happiness at the conclusion of the piece [...] by placing the words and phrases technically employed on these subjects in a kind of framework [...] and

[38] Douglas C. Engelbarth was one of the first to think in this direction and used the term 'augmentation' in his essay "A Conceptual Framework for Augmenting Man's Intellect", in which he outlines his belief that that computers more than number crunchers but tools for solving problems (but through that can also to make possible and create complex problems and questions) - an idea he developed further in the 1960s in the Augmentation Research Centre at Stanford University. Howard Rheingold summarises his beliefs as follows: "It occured [to Engelbarth] that if we could use the power of computers to perfom the mechanical of thinking and sharing ideas, people would be able to increase their ability to do the hardest part of thinking and solving problems together" (Howard Rheingold, *Virtual Reality*, p.72).

[39] In the Grand Academy of Lagado, a machine to combine fragments of text in order to "Improve speculative knowledge by practical and mechanical operations" (Jonathan Swift, *Gulliver's Travels* (Harmondsworth: Penguin, 1994), first published 1726, p.203).



> changing them by such a mechanical process as that by which weavers of damask alter their patterns, many new and happy combinations cannot fail to occur, while the author, tired of pumping his own brains, may have an agreeable relaxation in the use of his fingers.[40]

Two interesting premises can be observed here. One is that Scott sees combinatorics, i.e. the multiple combination of a number of elements, here "the words and phrases technically employed on these subjects", as one of the fundamental building principles of literature. And secondly that he implies that letting a machine taking over these tasks would free the author to do what he sees as the author's true purpose, namely to select amongst those combinations the suitable ones, and to add to the mechanised regularity of the design- and his reference here is to the weaving- the imperfections, irregularities, unexpected twists and turns of the human hand. An author's role is not to reproduce commonplace styles and patterns, but to artistically digress from them. It is interesting to note here that Scott envisions the machine as taking over the boring, formulaic tasks. Rather than having the capacity of creating literary works on its own and eventually making authors redundant, his imagined steam machine instead aids the author and frees some of his/her mental and physical energies for what he regards as the creative elements of writing.

This attitude is echoed in more recent developments of computer generated writing, especially by those researchers who come from a more literary background and show greater interest in the influences of the computer as a writing tool on the writing process rather than in the 'imitative' approach of the Artificial Intelligence research.

Michael Newman, author of photonovels and poetry and a protegé of W.H.Auden, for example, describes his initial encounter with the *Orpheus* poetry program, which includes a rhyme dictionary from which users can choose a set of rhyming words, decide on a form and/or the number and length of stanzas and then start to create their poem from this framework. After describing how two young children used the program to write "amazing" poems and concluding that the program has a democratising power, since it "presents each user with virtually all rhyming possibilities; the machine makes it possible for everybody to have the same size vocabulary!", he writes:

[40] Sir Walter Scott, *Betrothed*, quoted in: William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History*, vol.20 no.2 (Winter 1989), 291-304 (p.296).

> When I first used even a limited rhyming dictionary, I felt for the first time the freedom from having to use brain sugar in an inefficient, alphabetical, usually monosyllabic search for rhyme. Instead of the semiternal turn-off, I felt the masterful turn-on of leisurely running with the highlight bar through all possibilities and making careful premeditated selection. Selection is a higher-order process than mere recall.[41]

The computer here is seen as liberating, as freeing creating energy not only by relieving the author from tedious or boring tasks (as was the case in Scott's vision), but more far reaching. The computer is seen as a aid to provide inspiration, as a trigger for creative processes - as a collaborator rather than tool.

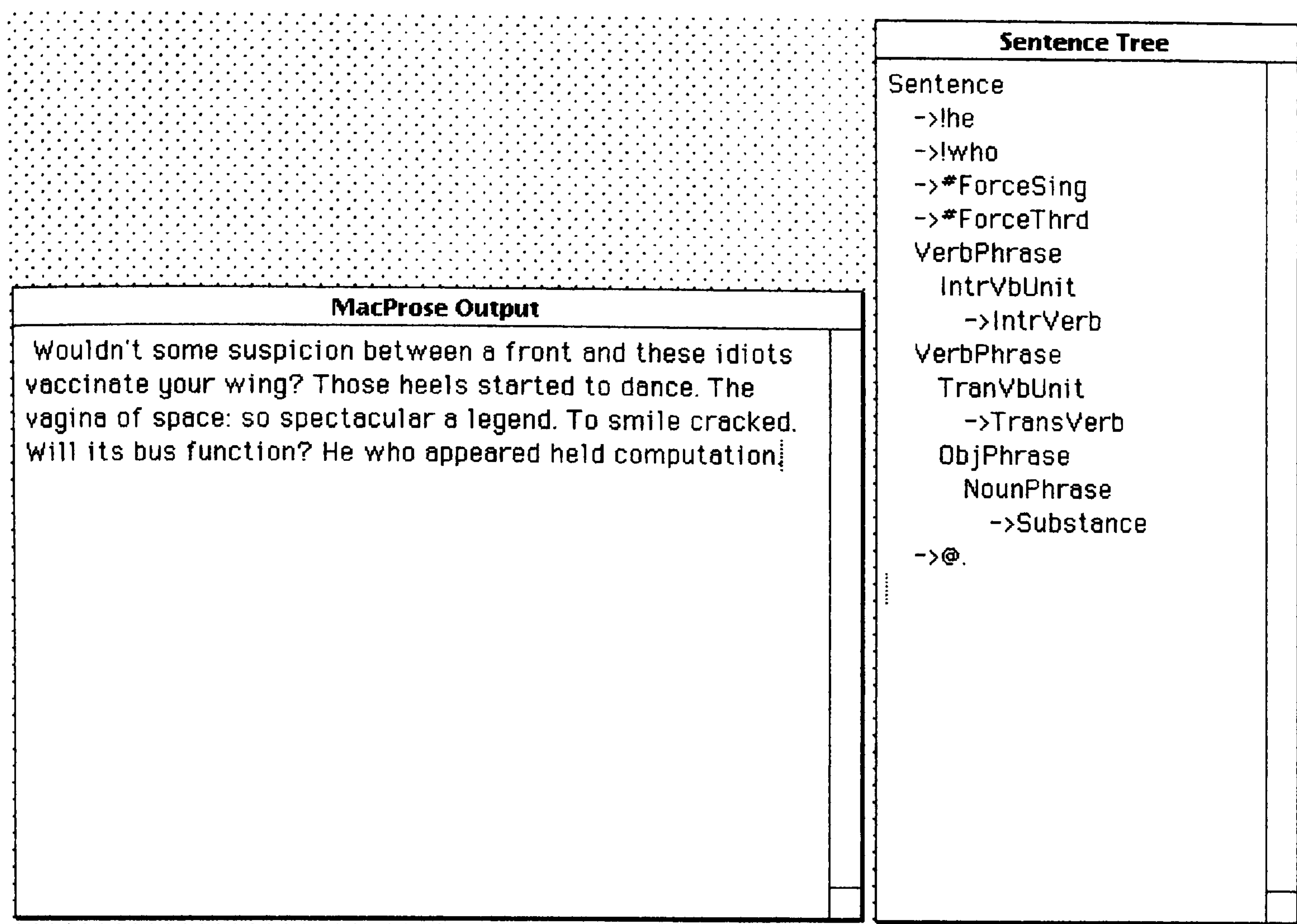
Unlike TALE-SPIN or Racter, the program's output is here not seen as the literary end-result, but as a set of possible combinations of certain pre-defined elements, as raw material from which the author selects what s/he judges as good, worth keeping or most appropriate. The author's role is here shifting again into the visible: s/he is not only the programmer behind the program (author as programmer -> computer program-> reader), but also selects from and works with the resulting output at the other end (author as programmer -> computer program- author as selector -> reader).

5.3.1:MacProse

After various attempts at imitative prose and poetry generating programs and a scansion machine, Charles Hartman discovered when working on *MacProse* how important the author is as a "selector" who works with the computer program's initial output.

Based on an editable dictionary and a grammar file, Hartman's *MacProse* can, with the help of efficient dictionary and grammar handling routines, fill pre-defined syntactical "tree" templates and produces in most cases grammatically correct English sentences by randomly choosing suitable words from its dictionary database.

41 Michael Newman, "Poetry Processing", *BYTE* (February 1986), pp.221-228 (p.226).



The window on the right of the above screenshot shows the structural tree of the last sentence of the output on the left (He who appeared held computation). A stock of these sentence trees comes pre-programmed by Hartman as part of the program. It is, however, possible for users to add their own.

But what is the use of an potentially infinite output of sentences, which, while grammatically correct still are fundamentally non-sensical and random? Hartman was rightly reminded of Borges' Library of Babel, in which every possible letter combination is kept in an infinite number of volumes in infinite library labyrinth. He describes himself spending days on his way to work "poring over fanfolded piles of computer paper, searching in vain for oracular truths "[42] and had to realise quickly that the unedited output of the program was, if regarded as an end in itself, useless and would need to be looked at as a means to an end, i.e. raw material in need of selecting and editing. He writes:

> I neither expected nor wanted to write myself out of the picture. Presenting the reader with all the computer's combinations was out of the question. I anticipated making any final selection myself.[43]

[42] Hartman, *Virtual Muse,* p.82.
[43] Hartman, *Virtual Muse,* p.67.

But instead of merely selecting the few gems from amongst the hundreds of lines of uninspiring output, he found that some of the sentences he came across caught his attention because they triggered associative processes and could be developed further by him from the original computer output to being "his own" work by changing the sentence construction slightly, replacing words by others not in MacProse dictionary or adding his own phrases or sentences. For Hartman a prose-generating program like *MacProse* is seen as a "first draft writer"[44], of which the unfinished but occasionally inspirational output can be selected and changed by the author who makes it his/her own material in the process.

Manipulating the program's output in such a way clearly moves his work outside the realm of research into Artificial Intelligence, in which such human authorial intervention would undoubtedly be regarded as cheating. His willingness to collaborate with computers, yet reserving the right to be the final judge moves his work into literary studies and creative writing.

> *One kind of help that poets do sometimes need is a kind of jolt, something to stir the mind's waters out of lassitude and placidity. (Charles O. Hartman)*[45]

Another function of text-generation programs has been identified by Hartman, namely as a means to overcome a "writer's block"[46] and to restimulate the imagination through new and surprising variations. A side-effect Hartman discovered when he worked on one of his earlier project, the poetry program *AleaProgram*. His program contained what he called the Hoard; he describes its purpose and function as follows:

You could type in a lot of fragments (phrases, single words, half-lines) and store them

[44] Hartman, *Virtual Muse,* p.83.

[45] Hartman, *Virtual Muse*,p.52.

[46] The opposite scenario of a computer program which causes and not helps to overcome a writer's block has been envisaged by Italo Calvino. He already plays with the idea of a manuscript which remains unfinished through the writer's block and is then finished by a computer in what is a perfect imitation of the original style in If on a winter's night a traveller. (For a detailed discussion of the computer in Calvino's work, see: Jonathan Usher, "Calvino and the Computer as Writer/Reader", *Modern Language Review*, vol.90, no.1 (January 1995),41-54, esp. p.48). Usher also discusses an essay by Calvino published in *Corriere della Serra*, in which he imagines a scenario in which an author gets an offer from a computer company, which has developed a program which could continue his unfinished work. The samples turn out to be "more authentic than the material he himself writes", which consequently "causes a writer's block, for the death of the (real) author is not the death of the (electronic) author. (Usher, p.48). Calvino's imagined computer program is based on imitation, a concept which is, despite the disappointing results in actual research, not only a powerful, but also a threatening one. Once the necessity of some form of human authorial input is accepted and the computer is seen as help/collaborator and not as danger/replacement, a more inspiring collaboration between author and computer can take place.

in a sort of treasury. Then, when you were writing a poem, if you got stuck and wanted an external, unpredictable impulse, one keystroke would call up a fragment from the hoard at random and insert it into the poem. Of course, you might immediately delete it (there was a one-key command for that, too). But in the meantime it might have given you another, more suitable impulse.[47]

The name *AleaProgram* is aptly chosen, since both the use of the computer as a first draft writer and as a means to help overcome writer's block depend on the aleatory nature of the algorithms behind programs such as MacProse and their ability to produce randomly infinite combinations of language.

Unlike programs which take the imitative approach, random programs such as MacProse, the Dada Poet described above or John Cagley's *Book Unbound*[48] have not been taught any literary structure or "narrative intelligence". To be fresh and new, they rely on their complete randomness and absence of sense, coherence and appropriate choices; language is treated as concrete material, as pure signifier, and chance is used as a main feature and as a great advantage. And it is here where these recent experiments in computer-generated writing link up with experimental literature and art of the twentieth century in which chance and randomness have played a major role; and it is this tradition that work in computer-generated literature, despite its distinct differences in general approach, shares with other computer literature experiments such as hypertext fiction.

5.4: Randomness and Chance

Chance and unpredictability are not usually associated with the computer, yet the machine is extremely good at creating a selection that is virtually random[49] , and, more importantly in the context of literary studies, free of understanding of meaning or associations.

Italo Calvino refers back to Ernst Gombrich when he argues in his essay "Cybernetics

[47] Hartman, *Virtual Muse*, p.52-53.

[48] John Cayley, *Book Unbound*, available for download at: http:\\www.demon.co.uk/eastfield/in/incat.html#BUNB.html

[49] Hartman describes some of the algorithms used to achieve a seemingly random (yet, if the starting point is known, reproducible) series of choices. A similar point is raised by Volker Grassmuck, who refers in his essay "Determiniertheit, Zufall, Unfall" to "Pseudo-Zufall" (pseudo chance). (http://www.race.u-tokyo.ac.jp/RACE/TGM/Texts/zufall.html).

and Ghosts" that chance plays a major role in any artform and in the processes of reception and creation of meaning. He argues:

> It is the childish pleasure of the combinatorial game that leads the painter to try out arrangements of lines and colours, the poet to experiment with juxtapositions of words. At a certain moment things click into place, and one of the combinations obtained - through the combinatorial mechanism itself, independently of any search for meaning or effect on any other level - becomes charged with an unexpected meaning or unforeseen effect which the conscious mind would not have arrived at deliberately.[50]

All narratives can be seen as based on combining and changing the permutations of the figures and the actions, all writing as a combination of permutations of language and through language motives and images. Which of these combinations are considered sensical and which non-sensical is to a large extent a question of reception and interpretation of the text and its context by readers; and which of them are given the status of literature and which are not is largely a cultural construct.

In prose or poetry generators the responsibility for providing these chance combinations has shifted away from the author to the computer itself. But these projects are not the first attempts in mechanising the permutation process and part of a search for 'perfect' randomness; various ways to create randomness and eliminate human consciousness from the selection process have been investigated in 20th century[51] literature and art.

> *Chance in the arts provides a means for escaping the biases engrained in our personality by our culture and personal past history, that is, it is a means of attaining greater generality. (George Brecht)*[52]

Change and randomness techniques have been employed by various artistic schools for - roughly summarised - two different purposes.

a) By using a mechanical device, certain of the creative choices and decisions which are

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[50] Italo Calvino, "Cybernetics and Ghosts", in: *The Literature Machine: Essays*, transl. by Patrick Creagh (London: Secker and Warburg, 1987) pp.33-27 (p.21).

[51] A philosophical interest in combinatorics and chance processes of combination can be observed long before it was taken up in the arts in this century. Ramon Llull, a Catalan mysticist of the 13th century, for example, devised a highly complex combinatorial system of wheels, symbols and letters to solve problems in all fields of knowledge and to provide a logical proof of the truth of Christianity which would help convert non-Christians (for details see Frances Yates essays on Llull in: Lull and Bruno: Collected Essays, Volume 1 (London, Boston and Henley: Routledge and Kegan Paul, 1982). Leibniz envisaged a machine which could express everything that can be expressed through combination of letters (see Grassmuck for details). For a survey of other mythical and mathematical explorations of combinatorial art and the related issue of change see: Janet Zweig, "Ars Combinatoria: Mythical Systems, Procedural Art, and the Computer, *Art Journal,* (Fall 1997), pp.20-29.

[52] George Brecht, "Chance-Imagery", in: *The Discontinuous Universe: Selected Writings in Contemporary Consciousness,* ed.by Sallie Sears and Georgianna W. Lord (New York and London: Basic Books, 1972), pp.76-96 (p.93).

traditionally considered to be within the realm and the responsibility of the artist, are taken by an external source outside the artist's control. This is often used as a shock technique, as for example in Dada art and literature by artists such as Tristan Tzara, Hans Arp or Marcel Duchamp[53] or by Daniel Spoerri for his book *An Anecdoted Topography of Chance*[54] to topple assumptions and expectations and to question traditional artforms, traditional themes and ideas about conscious creative processes, but also, for example by artists like Jackson Pollock or the composer John Cage, with a more artistic though theoretically rather than aesthetically biased purpose. All of these artists are interested in processes of reception and the uses of randomness to create new and unexpected, fresh combinations and achieve fresh associations.

b) Chance can secondly be used as a technique to overcome conscious choice and access parts of the unconscious, in order to bring out images, dreams and words from an area of the author's mind generally inaccessible. This is a particular aim in Surrealist writing. The Surrealists, though developing out of and overlapping with Dada techniques, are less of an "anti-art" movement and aim to seek a hidden truth through techniques like automatic writing. Through writing down thoughts as they occur without any conscious control or filtering, Surrealists hoped to

> discover stimuli which had been neglected in the past because of overzealous interpretation of reality based upon based upon familiar external experience and access a subconscious level of expression.[55]

Josef Ernst has rightly pointed out that, despite surface similarities to the Surrealist

[53] Tristan Tzara's cut-up technique has been mentioned already in Chapter 3; Duchamp's experiments included paintings consisting of marks on glass of matchsticks dipped in paint and then fired onto the glass with a toy cannon; Arp created collages by throwing scraps of paper into the air and fixing them with glue onto the canvas where they had landed. (For a further discussion of "change-imagery" in 20th century art, see George Brecht's article of the same title). - It should be pointed out here that strictly speaking there is no such thing as pure chance. Every event is an effect of a cause or a combination of causes, yet we tend to call these events random or chance if their cause is, as Brecht puts it "unknown or unlooked for or at least we are unable to specify it." (Brecht, "Chance-Imagery", p.77).

[54] Spoerri's book could be considered as a literary still-life. Spoerri, a writer closely associated with the Fluxus movement, chooses to describe in his text the 'random' collection of objects (pens, empty glasses, letters etc.) situated on his desk on one day in 1961, suggesting that the raw material for a literary text can be found in everyday objects - his book represents the literary equivalent of Duchamp's ready-mades. (Daniel Spoerri, An Anecdoted Topography of Change,). It is an interesting text also in other respects: a) As a collaborative effort; Spoerri's initial descriptions are annotated through footnotes by friends and translators, such as Emmett Williams and Dieter Roth b) As an example of unusual typographical presentation, in that the footnotes often take up more space than the initial description and the whole book is centred around a map of the desk in question. And c) as a constantly changing text in that each new print version so far added further anecdotal annotations or ammended old ones.

[55] Lazlo Moholy-Nagy,"Literature", in: *The Avant-Garde Tradition in Literature,* ed.by Richard Kostelanetz (Buffalo, NY: Prometheus Books, 1982), pp.78-141 (p.121). see also: Yves Dupressis, *Surrealism*, transl. by Paul Capa (Westport, CO: Greenwood Press, 1962) - especially the chapter on Surrealist Techniques, pp.24-56.

technique of automatic writing, computer-generated writing falls mainly into the first category, since programs are generally used as mechanical devices to generate variations and offer random choices while excluding the author's conscious or unconscious mind deliberately from those processes. Some of the results of these random processes can, however, as both Newman and Hartman have described above, have a secondary effect on the user, whose reading and interpretating of the output can then trigger surprising responses and creative impulses. A clear, evaluative distinction between Surrealist techniques, which in Ernst's description are

> not immediately, if at all, related to the reader's own psyche, nor could the writing be dismissed as gibberish because it was, by definition, drenched with symbolic meaning. [...I]t does reflect the interest of certain individuals to communicate in this particular ways[56]

and other random techniques including those using the computer which do not reflect an attempt to communicate cannot be made as clearly and simply as he does.

5.5: Conclusion

What this chapter has tried to show is how research and playful experiment in computer-generated literature approaches similar questions about literature to hypertext fiction. These questions, however, have already been explored previously in print, and while new tools in a new medium are used and the connection of literature and computer technology is innovative, the questions and strategies are not.

Certain early developments in computer-generated literature, i.e. those grounded more strongly in AI than in literary experiments and literary theory, go back to rather naive formalist and structuralist studies in their belief in the possibility of computerisation of literary structures and development of programs to imitate (and replace) authors. Later developments move away from a mimetic and imitative approach and exploit instead of suppress some of the characteristics of the computer's working, especially its ability for randomly filling given sentence structures - a process which results in texts which can then be used as input for further creative processes, and for the augmentation and stimulation of these processes. Orientation here lies more towards contemporary literary theory and strong links to (playful) experiments in art and music as well as literature can

[56] Josef Ernst, "Computer Poetry: An Act of Disinterested Communication", *New Literary History,* vol.23, no.2 (1992), 451-465.

be observed, some of which have been explored in this chapter and throughout this whole thesis. Yet, just like is the case with hypertext fiction, this strong tradition has been mostly overlooked by literature on the subject and again the term revolutionary is found more often than is justifiable.

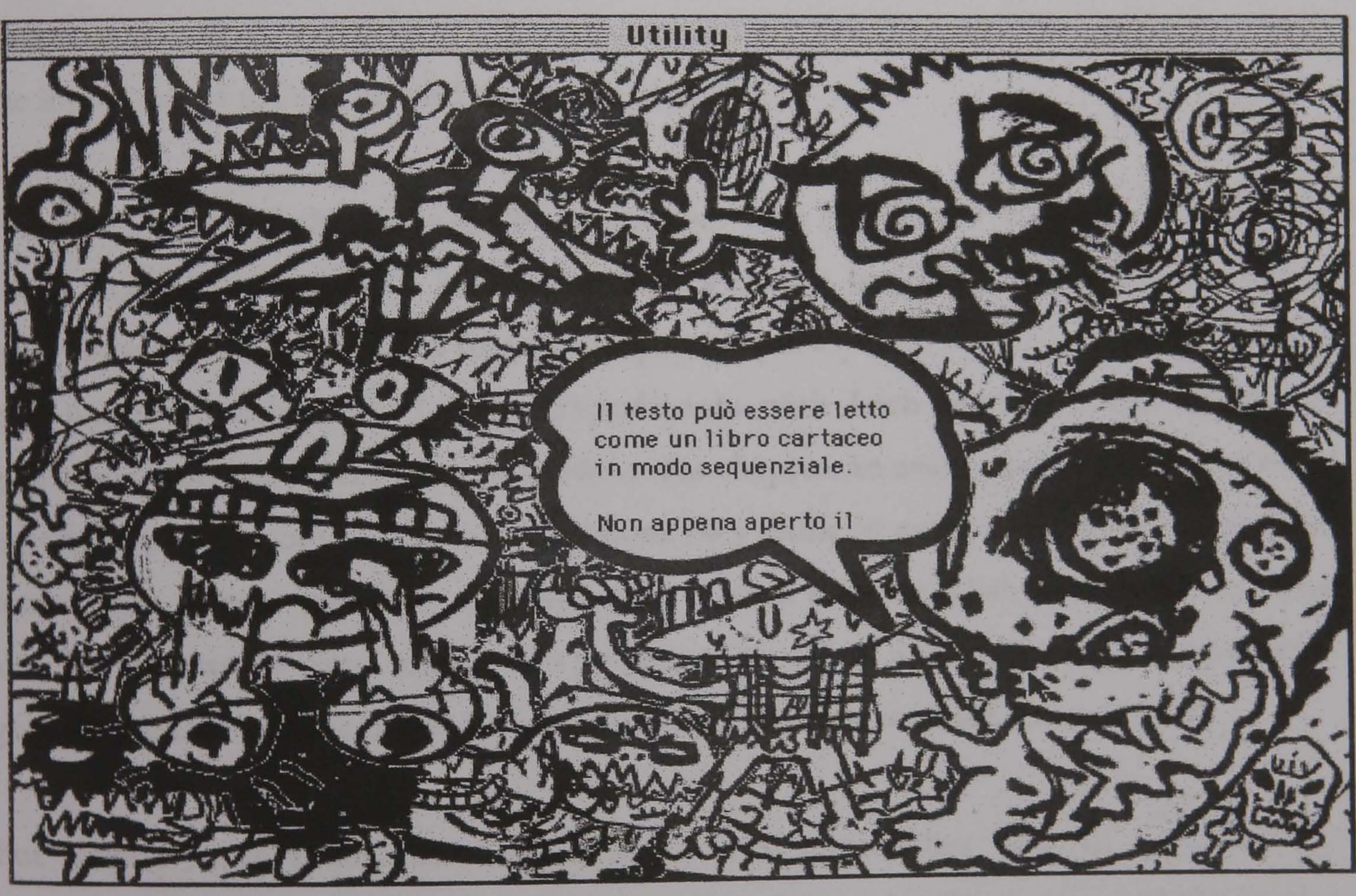
While its contribution to literary studies in terms of questions raised and explored is marginal, there are two other areas in which experiments in computer-generated writing can make important contributions to the exploration of the computer as a literary medium.

Firstly it provides an alternative to hypertext fiction. While they both certainly explore similar questions and share a tradition in the experimental literature of the 20th century, I have suggested above that computer-generated writing may be considered as more radical, which is an argument I would like to explore here further.

Text generation programs and their output differ from hypertext applications in some fundamental respects. The emphasis in more recent computer programs has been on chance, use of random techniques and the deliberate lack of conscious design. In this it is opposed to hypertext, which, though it can appear in the reading as confusing and unstructured, is a highly structured textual network. An aspect which has implications on the status and the role of both readers and authors. As I have tried to show in the previous chapters, hypertext fiction theory claims to initiate a radical shift away from an author-centred to an interactive reader-centred text, or, in Barthes' terms, from a writerly to a readerly text. However, due to a combination of factors, not least the very literal application of theoretical concepts of Barthes and also of reader-response theorists, the opposite effect can be observed. A work of hypertext fiction requires a highly structured, yet also a highly individual and personal network to be created by an author - leaving the reader on the one hand free to explore the resulting textual network through many different access paths, but on the other hand ultimately require him/her to re-create the author's initial associations to be able to 'make sense' of the work. Hypertext fiction tries to leave the distinction line between author and reader permeable or even to merge the author and the reader function, yet effectively re-establishes the figure of the author.
Computer-generated writing programs - both the early attempts with the emphasis on

imitation, but even more importantly those which experiment with random techniques, are more radical about the shift from author to reader in that they let the machine take over at least some of the author's functions, attempt to cut out direct authorial intention and provide output text which leaves the 'sense-making' only to the reader.

Probably the most relevant distinction between the two formats is that writers of hypertext fiction regard their work very much as literature, albeit of a new form and in a new medium, - re-defining the boundaries of the term, yet never questioning the category as such. Computer-generated texts go more to the heart of the "What is literature?" question, and especially of the debate about "What are the possibilities for literature in a digital age?"



A project such as the (utterly unutilitarian) UTILITY program 'published' in I/O/D 3[57] , which displays in speechbubbles text randomly selected of the computer's hard disk, makes use of computer technology in the way it combines graphics with text and selects fragments of text randomly to create very cleverly new, surprising and ever-changing context for the text pieces and can be seen as a piece of digital kinetic poetry. Yet it is

57 I/O/D available free at: :http://bak.spc.org/iod/

not a structured and organic work of art. It falls, together with many other prose and poetry generating programs into, in Peter Bürger's distinction, the category of '<u>avant-garde</u>', unlike most hypertext fiction, which, despite their avant-garde claims and the use of a new medium which seems to justify the avant-garde label, can be described as '<u>neo avant-garde</u>'.

In *Theory of the Avant-Garde*,[58] Bürger outlines a distinction between the two terms, and though his study does not include electronic art or literature, the categories are transferable and applicable to it. As neo avant-garde he describes artists which work with a "consciousness that may well be avant-gardist", but who establish their work nevertheless as art: "The neo avant-garde establishes the avant-garde as art and thus negates genuinely avant-gardist intentions."[59] The 'true' avant-garde, in his definition, questions the whole category of art, produces anti-art, intents to shock, and "works with the intention of uniting art and the praxis of life"[60] .

The shock value of the avant-garde is however very difficult to sustain, and once the shock factor has been lost, and Bürger argues that it has, it is virtually impossible to recover; he says "Nothing loses its efficiency more quickly than shock; by its very nature it is a unique experience"[61]. Literary experiments with both hypertext and computer-generation share, as I have tried to show in this chapter, an avant-garde tradition of print experiments, and both see the new medium they work in as an opportunity to recover some of the 'shock-value' lost. Yet hypertext fiction does establish itself as an art form and, for the reasons listed above, fails to appear as radical and challenging as computer-generated texts once the initial 'shock' of reading in a new medium has worn off.

But despite these fundamental differences, both approaches have in common the underlying desire to explore the possibilities for and the role of literature and the format of the literary artefact in an increasingly digital age and play a necesarry and important role in charting a cultural shift. The role of the computer in society is changing; we are gradually coming to see the computer rather than the book as a carrier of information

[58] Peter Bürger, *Theory of the Avant-Garde*, Theory and History of Literature, Volume 4 (Minneapolis: University of Manchester Press / University of Minnesota Press, 1984).
[59] Bürger, *Theory of the Avant-Garde*, p.80.
[60] Bürger, *Theory of the Avant-Garde*, p.80.
[61] Bürger, *Theory of the Avant-Garde*, p.81.

generally, but more specifically of culture, and maybe even literature.

Literary experiments using the computer play an important role in the exploration and the evaluation of these changes, as William Paulson has pointed out when he writes in his 1989 essay "Computers, Minds and Texts":

> Computers are fast replacing pen and paper, and could literally replace the book, though that will not happen soon and may not happen at all. For the moment, however, the concrete change in technology is not the most important aspect of the so-called computer revolution. What matters most is the conceptual, social and economic situation created by the computers and the science of information. [...T]he book as 'symbol' has been decisively replaced, first perhaps by the machine, certainly now by the computer.[62]

This cultural shift suggested by Paulson nearly ten years ago has become increasingly evident since then; the wider context of cultural change and of the computer as a primary symbol of not only information but also culture, and the role of and place for (electronic) literature linked to such changes will be subject of the next and final concluding chapter of the thesis.

[62] William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History*, vol.20 no.2 (Winter 1989), 291-304 (p.293).

Chapter 6 - Conclusion

> *Extremists - I meet more and more of them - argue that the printed page has been but a temporary habitation for the work. The book, they say, is no longer the axis of our intellectual culture. There is a kind of aggressiveness in the proselytizing. The stationary arrangement of language on a page is outmoded. The word, they say, has broken from that corral, is already galloping in its new element, jumping with the speed of electricity from screen to screen. Indeed, the revolution is taking place even as I type with the antediluvian typewriter onto the superseded sheet of paper. I am proof of the fact that many of us are still habit-bound, unable to grasp the scope of the transformation that is underway all around us. But rest assured, we will adjust to these changes, as we do to all others, by increments; we will continue to do so until everything about the way we do business is different. So they say.*[1] *(Sven Birkerts)*

The danger with any academic project dealing with very contemporary, ongoing projects, especially if the subject is a relatively new literary form in a new textual medium, is that the status quo of the artform is in constant flux and the body of work, both primary and secondary material, can change dramatically during the process of writing. When this project started, hyperfiction appeared to be on the verge of a breakthrough; while still an 'underground' phenomenon, it seemed close to reaching a wider audience and becoming an accepted form of literature and a strong contender for the first widespread and widely accepted literary form of the digital age.

Four years later the situation has changed. Judging by the quantity of hyperfiction as featured in the first three chapters of this thesis, it already seems, at least in the form described here, very much a thing of the past, past 'its peak' in both literary output and critical attention. While major newspapers have carried features on hypertext (and hypertext fiction), a number of university departments[2] have added either courses or

[1] Sven Birkerts, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age* (Boston and London: Faber and Faber, 1994)p.152.

[2] For a list of university courses in the United States relating to Hypertext Literature see Scott Stebleman's list of links at: http://gwis2.circ.gwu.edu/~scottlib/hyperbib.htm/.

whole degree programmes based on hypertext literature to their syllabi and an infrastructure of both discussion (such as the newsgroup alt.hypertext or the ht_lit mailing list[3] and a number of conferences). and distribution has become established, electronically distributed or consumed fiction in hypertextual format still remains on the margins of both the literary establishment and the computer market[4].

The discussion of hypertext fiction has not come to an end, but it has changed tone and direction, away from the radical rhetoric of revolution and newness towards a more balanced viewpoint, one that puts hypertext into a tradition with other forms of experimental writing and regards it as only one of the possible formats literature might take in the developing new medium of the electronic text. It now also includes other experiments such as computer generated writing or collaborative projects.

The fact that this rhetoric of binary opposition and radical newness dominated the first phase of hypertext criticism was predictable when one considers the history of most avant-garde movements, and is intriguing in itself, since it reveals the tension and insecurity in which literature, literary criticism, and the printed word in general have found themselves in this transitionary period from page to screen, prompting a struggle to find and establish new forms and new contents.

More recent studies like Espen Aarseth's[5], which provides a context in which this thesis seeks to locate itself, distance themselves explicitly from early hypertext theory which placed hypertext solely in the realm of the computer and tended to negate its own literary print tradition. Aarseth argues for the use of the classifying term "ergodic literature" which he defines as literature in which "a nontrivial effort is required to allow the reader to traverse the text"[6] and which he sees as another perspective on literature (regardless of the medium in which it is transmitted) like postmodernism, hermeneutics or psychoanalysis, but with the focus on the actual involvement of the reader. His study,

[3] to join eMail: subscribe@consecol.org

[4] A market which has taken up the idea of non-literary hypertext with great success; demand for CD-ROM versions of encyclopaedias (such as the *Encyclopaedia Britannica*, dictionaries, reference books and catalogues)is well established and the products are very visible.

[5] Espen Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore and London: Johns Hopkins University Press, 1998).

[6] Aarseth, *Cybertext,* p.1.

as well as my examinations, tries to regard hypertext as a principle, as a possibility of organisation of textual ideas, be it in print or on the screen, rather than the actual implementation of the concept in digital form; a principle which can be found underlying many fictional print texts as well. It has been the aim of this study to move away from the artificial dichotomies held up by early hypertext theories, dichotomies described in earlier chapters, such as screen vs. print, non-linearity vs linearity, interactivity vs. passivity, and to re-historicise hypertext fiction by putting the recent developments on screen into an evolutionary rather than revolutionary context.

Aarseth takes a similar approach; but where his study falls short is in the actual examination of these printed texts. It is my belief that the strong emergence of new textual media gives us a new frame of reference, and with it a new vocabulary, to look back on some of the literary experiments of this century and read them again in another light. Respectively, a closer look at these texts can help clarify the position of "hypertext fiction" (in the sense of electronic fictional texts in hypertext format) in a literary tradition.

In one respect hypertext fiction can be regarded as a failed project, an experiment too self-consciously based and dependent on a theoretical framework and thereby 'exhausting' itself in the sense of the word suggested by John Barth[7], and too much of a hybrid form. Written often by established print authors or literary scholars, read by readers used to print, judged against the same print standards and conventions it wants to oppose, it becomes what Myron Tuman calls "a new kind of book, written by a new kind of author, despite the widespread agreements that the genre destroys our notion of text and author."[8]

But in this hybridity, in this simultaneous rejection of the old while being firmly rooted in it, lies also the success and the importance of hypertext fiction. Success comes here not as a literary form in itself and also not by establishing a theory of itself, but by representing a bridge, a necessary step from the world of the dominant print text and

[7] John Barth, "The Literature of Exhaustion", *The Atlantic Monthly*, vol.220, no.2 (1967), 29-34.

[8] Myron C. Tuman, *Word Perfect: Literacy in the Computer Age* (Washington, D.C., London: Falmer Press, 1992), p.78.

the codex book to a digital textual environment. The success of hypertext fiction lies in its function and in the way it experiments with (literary) text on screen and the fact that it forms a part of an exploration of new literary forms which are currently emerging as a result of wider transformation of the written word.

Hypertext Fiction and the other forms of literary electronic collaboration and computer generated writing discussed in earlier parts of this study ask a number of important questions. And even though the answers they suggest are not always convincing and without flaws, they represent an important part of the debate in the humanities about digital text. Questions raised concern the forms in which literature could be possible in the new electronic medium and more importantly the future function of the printed text. What, these projects ask, to employ a rather overused trope, is the "future of the book".[9]

6.1: Evolution or Revolution?

There can no doubt that hypertext fiction refers back, explicitly as well as implicitly, to a long tradition of literary experimentation in which the aim has always been to question, widen and change the definitions, the underlying expectations of literature and the dividing line between literature and other artforms and its relation to them, yet always remaining within the realm of the textual media. One of the valuable contributions of hypertext fiction is the transferral of this exploration into the electronic medium, using similar techniques and taking up similar questions, albeit in a new medium.

Remaining true to this tradition is at the same time extremely difficult, and the overwhelming newness of the medium leads to the permanent internal contradiction explored in this thesis - the rejection and denial of a tradition of experimental writing (including a rhetoric of newness and binary opposition) while at the same time taking up similar questions and being influenced by the underlying theory of the rejected tradition. By bringing in examples from experimental fiction of the 20th century which explore similar questions, chapter 2 and 3 of this thesis first explored how two theoretical keyterms - non-linearity and interactivity - were taken up by recent hypertext theory and appropriated by it as features unique to the electronic text, and then secondly attempted

[9] A rather overused trope, as for example in: Geoffrey Nunberg (ed), *The Future of the Book*; Philip Hill (ed), *The Future of the Printed Word*, Don Webb, "The Future Book" or Paul Roberts, "The Future of Writing", *Independent on Sunday*, 29 September 1996.

to re-establish a historical, "evolutionary" context.

At the same time the chapters pointed out one of the dangers of the literal interpretation and implementation of terms such as interactivity or intertextuality in hypertext fiction. As outlined in the introduction, a similarity between postmodern theory and hypertextual practice is evoked, for example when David J. Bolter argues that "postmodern theorists from reader response critics to deconstructionists have been talking about text in terms that are strikingly appropriate to hypertext in the computer"[10].

Terms which are powerful theoretical concepts in the print context from which they originate are taken over uncritically and without redefinition into a new context and are not only in danger of being reduced to clichés by being overused, but also of losing their effectiveness as theoretical terms when applied too literally. "Intertextuality" in *Patchwork Girl* is reduced to the level of creating a literary patchwork of fragments from different sources patched together by hypertext links (see page 80); the non-linearity of Moulthrop's hypertext manifests itself in an often disorienting structure (see page 32)[11]; the interaction of the reader with Joyce's *afternoon* (in which the hypertext links, the 'words that yield' are not marked and have to be discovered by the reader in a process of trial and error) could lead to feelings of lack of control rather than of empowerment.

There are, however, other more recent examples of electronic hypertext fiction which acknowledge the literary tradition to which they belong and do not attempt to *improve* on their theoretical and applied explorations into the possibilities of literary expression (within the print medium), but instead focus on other important aspects that a move into digital text entails, namely that it allows new access to otherwise rare or unobtainable material, that it changes the economy of literary publishing and that it allows us to re-read older texts afresh.

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[10] He continues: "When Wolfgang Iser and Stanley Fish argue that the reader constitutes the text in the act of reading, they are describing hypertext. When the deconstructionists emphasise that the text is unlimited, that it expands to include its own interpretation - they are describing hypertext [...]. When Roland Barthes draws his famous distinction between the work and the text, he is giving the perfect characterisation of the difference between writing in a printed book and writing by computer. (Jay David Bolter, "Literature in the Electronic Writing Space", in: Myron Tuman (ed.), *Literacy Online: The Promise (and Peril) of Reading and Writing with Computers* (Pittsburgh: University of Pittsburgh Press, 1992, p.19-42 (p.24).

[11] Vividly described, for example, by Sven Birkerts, who writes after his first contact with Moulthrop's *Victory Garden* that "I did not feel the exhilarating freedom I had hoped to feel. I felt, rather, an assault upon what I had unreflectingly assumed to be my reader's prerogatives." (Sven Birkerts, *Gutenberg Elegies*, p.162).

One example of a hypertext re-publication of a print text which does allow us to focus on a text previously published in print in a different manner is the online version of *OUT*, a seminal postmodern novel by Ronald Sukenick, first published in 1973.

6.2: OUT in Print / OUT online

> *One can envision novels printed on scrolls, on globes, on moebius strips [...], on billboards - or not printed at all but produced on electronic or video tape, or acted out on stage. (Ronald Sukenick, The New Tradition in Fiction, 1975)*

Though Ronald Sukenick evoked the possibility of fiction moving outside of its traditional print format in his 1975 essay[12], he at the same time regarded it as a move in the wrong direction. "To complain that a novel can't escape its binding [...] is like complaining that the mind can't escape from its skull"[13] he argues, and proposes that what is needed is a re-thinking of the novel form within its print medium - a re-consideration of the concrete, technological reality of the book and the use of its three-dimensional and visual nature to work together with the narrative embedded in it.

It is in his novel OUT[14] (1973) where Sukenick puts his theory into practice and uses typography in an extreme way both to support textual meaning but also to create text-independant visual meaning. The text is divided into ten numbered chapters; with each chapter the white space between the text gradually takes over, paragraphs on the page shrink by one line, until they are eventually down to a single line and consequently disappear completely, leaving behind pages of white space.

OUT is, however, not a print hypertext; despite its fragmented narrative on both textual and visual level and the special emphasis on the spatial text arrangement, it depends fundamentally on a linear reading and the conventions of the printed text, it works within print and against print. So how, one might ask, could a text seemingly inseparable

[12] Ronald Sukenick, "The New Tradition in Fiction", in: Raymond Federman (ed.), *Surfiction: Fiction Now...and Tomorrow* (Chicago: The Swallow Press, 1975), pp.35-45. OUT is not the only example of what can be called the "typographical novel", there are a large number of other fictional texts written and published around the same time that work in a similar direction, not only in the U.S., but also in Europe and Latin America: R.Federman's *Double or Nothing*, (1971), *Take it or Leave it* (1976); S.Katz's *Exagggerations of Peter Prince* (1968) ; the French (Nouveau) Nouveau Roman (M.Butor's *Mobile (1962)*; M.Roche's *Compact* (1966)); B.S.Johnson's *The Unfortunates (1969)*; Alan Burns' *Dreamerica!* (1972), C.Brooke-Rose's *Thru* (1975) in GB, Cortázar's *Rayuela (1962)* in Latin America - to name but a few.

[13] ibid, p.39.

[14] Ronald Sukenick, *OUT* (Chicago: The Swallow Press, 1973).

from the medium it was conceived in benefit from a move into the electronic medium? OUT is available at www.altx.com and reading it on-line offers a number of interesting insights and proves that the novel is still current and relevant.

First of all, it makes a text that was previously only available in the small print run common for "avant-garde" texts available to a new and wider audience. The postmodern concept of the avant-garde differs radically from modernism and the other -isms of the early 20th century (Futurism, Dadaism, Cubism etc.). Ihab Hassan tries to define the distinction by saying that it is "cooler (in McLuhan's sense of actually inviting participation), less cliquish, less averse to the pop, electronic society of which it is part."[15] Print can contradict these tendencies, it is not 'pop', it is relatively expensive to produce and distribute and it is not 'cool', it can encourage participation only metaphorically but not literally; reasons that explain the dissatisfaction with print obvious in many postmodern novels including OUT. Electronic text on the WWW, on the other hand, supports these elements: it is easy to produce, easy to distribute and easy to interact with. It renders "avant-garde" in the traditional, exclusive sense a meaningless concept and puts in its place avant-pop, a movement of which Sukenick himself says to be one of the inventors and altx is one of the most important collective voices. OUT predates the new medium and avant-pop but also already anticipates them with its references to popular culture and pastiche of styles and the self-conscious use of its own medium, which is one of the reasons why it still works well in its new format.

OUT is an interesting example to contradict the above mentioned dichotomies which are often build up for print vs screen in both media. In print, most readers, having the whole text physically present, discover and grasp the underlying typographical principle almost immediately, an important (non-linear) but often overlooked reading strategy to make sense of a text as a whole is to flick through the book, to get an idea of its meta-structure and macro-structure. In the electronic version now available, chapters can be accessed in any order, but because they are still numbered from 10 down to 1, most readers will access them in what appears to be their "natural" hierarchical order. In consequence, the gaps in the text, the growing spaces between the paragraphs are

[15] Ihab Hassan, *The Postmodern Turn: Essays in Theory and Culture* (Ohio State University Press: 1987), p.91.

discovered only gradually, bringing a much greater surprise element into the text.

The online text also pushes the actual narrative into the foreground. All typographical novels play with the signifier / signified distinction, make us look at the material text (the signifier) as well as through it at what it represents (the signified), ideally achieving a constant oscillation between the two: a degree of defamiliarisation through formal experiment while at the same time allowing readers to get into the text in order to tell a story. The danger is of course that the visual experiment becomes the overwhelmingly dominant element; critical readings of typographical novels, and OUT is no exception, often focus exclusively on this side. In an electronic format, an environment still unfamiliar and also relatively conventionless, the typography (that in print is so immediately striking against the background of print conventions) loses much of its impact[16], but at the same time gives readers the space to concentrate on OUT's narrative which, after all, is a fascinating, dense and intense novel that now has the chance to be approached as just that.

It is interesting to observe some of the strengths of online writing in this electronic version of OUT. It is not the interactivity or the non-linearity of the text that are striking, but the renewed access to the text. Unlike other hypertext fiction OUT online does not foreground the construction of the text and its underlying theoretical framework, but instead focuses on the accessibility of the text. The text is more accessible on two levels: firstly on the level of distribution; a previously out-of-print text, which, even when available in print, had the small print run of an avant-garde publication, is now freely available to old and new interested readers with access to the internet. Secondly, as described above, it makes the text more accessible on a literary level, focusing the attention on the narrative itself. This may well point out a trend for the future development of hypertext fiction, away from direct opposition with the printed word towards finding a new form and unique strengths in reference, but not in competition to print.

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[16] Volker Grassmuck has rightly argues that a language game can only be provocative if it has a strong framework to distinguish itself from, if the game becomes the rule, it loses much of its impact. ("Determiniertheit, Zufall, Unfall", at: `http://www.race.u-tokyo.ac.jp/RACE/TGM/Texts/zufall.html` (26/5/98).

The website where the electronic version of OUT is published is the Alternative X project by Mark Amerika. Amerika's beliefs in the importance of the collaborative nature of the internet and the consequences of this collaborative atmoshere on the notion of authorship were discussed in Chapter 4. The republication of OUT is an interesting example of Amerika's view that the radical distinction between print and screen text and the juxtaposition of the two together with a dismissal of one in favour of the other is a false and unproductive one.

In his manifesto of Avant-Pop writing he argues that, while other forms of writing will emerge in the electronic medium, books will still be written, printed, published and distributed[17], and has claimed in an interview that he disagrees with "a lot of people raising phony distinctions between books and computer-mediated environments"[18]. He says:

> I should also say that I have a problem with so many people trying to line this up as an either/or dilemma. This is an and/and situation. Books AND computers. Thinking AND electricity.[19]

What Amerika is implying is that no medium ever completely renders its predecessor obsolete. It might take over some of its functions, it might, at least for a while, work with ideas and concepts taken over from the old medium and it might, as it struggles to establish its own identity and forms, radically reject what came before. In hypertext fiction exactly these trends can be observed, and no study of hypertext fiction can simply focus on the study of the genre as isolated literary text, but also has to look at their function and regard the texts as attempts of the new medium to find its appropriate forms of literary expression.

[17] Books will remain books and bookstores will continue to sell them. Writers will continue to get single-digit royalties and the distributors and bookstores will continue to reap most of the profit. The Best-Sellers list and the New York establishment will continue to maintain their rock hard hegemony. BUT: now there's more to communication, more to language, more to text production, than the book. There are all manner of videos, graphic novels, dissident comix, CD-ROMS, computer hypertexts, earplays, and, soon, in a universally-accessible location near you, a small black box that will sit on top of your reconstructed soon-to-be-a computer TV that will bring into your private space all kinds of fireworks created by (yep, it's true) writers. Electronic writers. (Avant-Pop Manifesto)

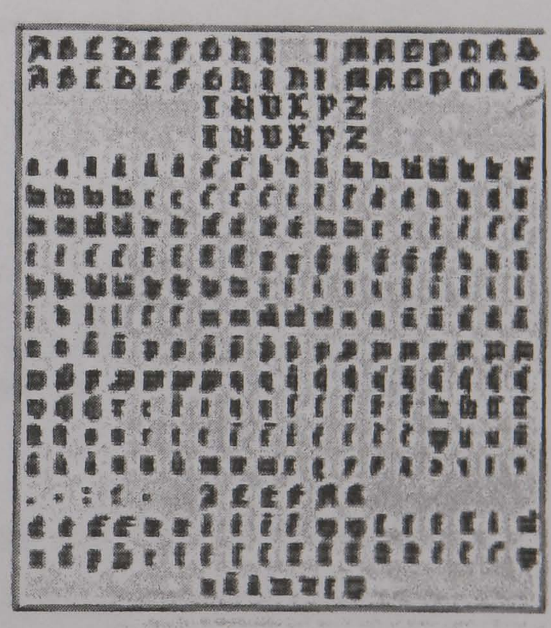
[18] "Prose in Motion - An Interview with Mark Amerika", at: www.altx.com/interviews/mark.amerika.html.

[19] "Artists and Networking; an Interview with Mark Amerika" at: http://www.york.ac.uk/~jjrkl/artlit.html.

> *The information highway is for bulletin boards on esoteric subjects, reference books, lists and news - timely, utilitarian information, efficiently pulled through the wires. Nobody is going to sit down and read a novel on a twitchy little screen. Ever.*[20]
>
> *Anybody who tries to use an old form with new technology is just not getting it. Like people doing hypertext novels. The whole point of the novel is the narrative flow. I don't want to be handed a bunch of index cards and told, Here, shuffle these, and read them in any order. The things I've seen online, the sites that work - I didn't even know what to call them. (Pagan Kennedy)*[21]

Both Proulx and Kennedy make interesting points. They both do not want to see old established forms, in Proulx's case the traditional novel and in Kennedy's case the avant garde text, simply taken over into the new medium. Proulx objects because she believes that the printed codex book is the ideally suited format for the novel and she cannot see any advantages in a transferral to another format; Kennedy feels that a repetition of an experiment would not be effective and that new, not yet clearly defined and developed forms will have to be developed.

The discovery and development of new artistic forms cannot, however, be instant and requires a process of first appropriation of previous artforms and secondly of overcoming them, a process which can take time and can be observed in other similar situations where a new artistic medium entered the scene and both the old and the new medium had to readjust their forms and conventions.



Johannes Gutenberg. Die 299 für seine Bibel verwendeten Buchstaben und Zeichen. Die verschiedenen Formen des gleichen Buchstabens, die Abkürzungen, Doppelbuchstaben und Ligaturen ermöglichten es ihm, alle Zeilen der Bibel gleich lang zu setzen, ohne daß der Abstand der Wörter differiert

For the first few decades after the invention of the printing press, for example, the aim was to make the printed book look like a manuscript and a large letterset was employed to reproduce the linked up look of handwriting. Sarah Smith examines the conventions of early film and argues that "early filmmakers, thinking film was like theatre, always filmed actors from head to toe and used painted scenery"[22] before

[20] E. Proulx in an interview with the *New York Times*, quoted in James O'Donnell, *Avatars of the Word*, p.71.

[21] interview with Pagan Kennedy, "Zine Queen: Pagan Kennedy in the age of the Web", *Wired*, Vol.4, No.1 (January 1996), p.133.

[22] Sarah Smith, "Electronic Fictions: The State of the Art", *New York Review of Science Fiction*, n.63 (November 1993), 1, 8-11, p.1.

they gradually discovered the language of close ups and of the moving camera.

Early electronic text depends on the printed page as a reference framework in a similar fashion to early film. Features such as virtual spiral notebooks, dog-eared corners and paperclips use the familiar concepts of the printed page as a metaphor. As argued earlier, one of the features of the electronic text is that it resides in the computer memory and has to be 'translated' into something legible on the screen by the machine. On a more conceptual level, these print metaphors help us to 'translate' the new form of text into a conceptual framework familiar and graspable to readers who come from a culture dominated by the printed work. Patrick Connor refers to these metaphors as "crutches" in the transition from the printed to the electronic text and, in reference to the "residual orality" which Walter Ong sees in the written text, refers to a "residual bookishness" in hypertext[23].

This use of 'bookish' metaphors is not only useful and helpful, it is also necessary in order to discover which functions of the old medium can be carried over and taken over by the new and which will stay with the old, as B. Anderson argues in the study *Computer as Medium:*

> The computer is a new electronic substance waiting to be formed. The new substance puts restrictions on the form at the same time as it opens up for new possibilities. We are trying to understand this new substance, find out what its restrictions are and discover its unique possibilities of aesthetic form. In order to find them we have to explore older media, since new artforms are created through older ones by consciously breaking established forms.[24]

But what happens to the old medium once the new medium has developed its own identity and has taken over some of the functions of the old? When photography, for example, took over the task of providing a faithful representation of static reality, this was not without influence on other visual arts. Around the same time painting, now being freed from this task, developed impressionism, expressionism and eventually abstract, non-representational art.

Could something similar happen to the book once it is no longer the only possible carrier

[23] Patrick W. Conner, "Hypertext in the Last Days of the Book", *Bulletin of the John Rylands University Library of Manchester*, vol.74, no.3 (Autumn 1992) 7-24.

[24] Peter Bøgh Anderson, Berit Holmqvist and Jens F. Jensen (eds.), *The Computer as Medium* (Cambridge, Cambridge University Press, 1993), p.144.

for textual information? Already a large amount of non-fictional information such as timetables, telephone books, catalogues and reference material is available in the often more convenient electronic format as well as in print, the *Encyclopaedia Britannica* being a prime example. Judging by the success of these projects and their obvious advantages of easy searchability and adaptability, it can be easily imagined that most of this type of factual information will soon have moved away from print. Experiments in hypertext fiction and other forms of online literature continue this exploration into the area of fiction and it is for this reason that hypertexts are worth observing in the context of literary studies.

But what will happen to the book? What is the printed equivalent of abstract art? The very self-conscious narratives of postmodernism indicate a high awareness of the process of rethinking of the book form; artist books on the other hand, focus more on the material. The author of the catalogue of an exhibition on the subject organised by the British Council claims:

> Most of the books in this exhibition are not what I'd think of as good old-fashioned books. They aren't really concerned with a linear communication of ideas at all. Now that other media have to some extent supplemented (not supplanted) books as far as message carrying goes, it's as if books themselves feel their liberation from having to carry anything. In this situation, their only possible ally is art: art for art's sake. (Exhibition catalogue)[25]

6.3: The Book as Carrier of Information and a Symbol of Culture

Artist Books represent a radical interpretation of this phase of reorientation in which the printed book finds itself, but also an indication of the possibilities which have opened up through the developments in computer technology, not only to experiment with new formats and contents in a new textual medium, but also the possibility of reconsidering the old forms. As mentioned in the introduction, this situation is unique in the history of the printed book and allows a technology which has become almost natural and transparent to be reconsidered. Artist books are an extreme example in that they focus almost exclusively on the medium itself, denying all access to any content other than their own 'opaque' self- reflection, they move away entirely from seeing the book as a

[25] *Artists' Bookworks, A British Council Exhibition* (London: British Council, 1975).

container for content, be it literary or non-fictional.

> *How will literature survive the development of other media of communication? [...] The day when the book ceases to be the principal vehicle of knowledge, will not literature have changed its meaning once again? Perhaps we are quite simply living through the last days of the book. (Gérald Genette)*[26]

Genette's provocative thoughts on the survival of the book are not backed up by fact. More books than ever are produced and bought in countries with a high proportion of internet access[27], more paper is being used and certainly the paperless office is a yet unfulfilled ideal. The future, as Umberto Eco argues, may be bookless, but not paperless[28].

If seen purely as a carrier of information than the book is indeed obsolete. New technologies are better in coping with the timebound and cross-referenced nature of information. But, as William Paulson argues in the his NLH article of 1989, the computer is less important in its concrete application than it is as "conceptual model[s] and shaper[s] of intellectual and social context"[29]. The printed codex book is more than just a carrier of information, it is a symbol and an embodiment of culture, it offers "a reading experience"[30], and it is on the more conceptual level that the computer is perceived as a threat[31] to 'culture' and where a lot of reluctance towards computer technology in general and computer literature specifically originates from. Electronic text can change the way we think about cultural processes, cultural artefacts and of concepts of literature and literacy, as Myron Tuman points out when he argues that the computer has

> the potential to revolutionise our understanding of literary, in the process changing the three basic terms text, reader and writer. Yet just as it is not the industrial technology of printing but industrial culture in its entirety that is responsible for the shape of print literacy, so it is the totality of post-industrial

[26] Gérald Genette, *Structuralism and Literary Criticism*, p.22.

[27] "Buch & Bites: In Ländern mit hoher Computerdichte haben Bücher Konjunktur", *Die Woche* (15.November 1996), p.28.

[28] Umberto Eco, "The Texts to Boot", *The Observer*, 18 June 1995), p.4.

[29] William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History*, v.20 n.2 (Winter 1989), 291-304.

[30] Douglas Rushkoff, "A Computer Ate My Book', *The Guardian OnLine* (15 May 1997), 11.

[31] Or, depending on the point of view, as well as a welcome relief. Bolter, for example argues against the equation of the loss of the book = the loss of culture. He argues (Bolter, *Writing Space*, p.237) that "loss of culture usually means loss of the distinction between HIGH and LOW culture. HT helps to move towards a more eclectic style".

culture that will determine the future of online literacy.[32]

Tuman is right in saying that electronic text is only part of a bigger cultural shift, one that Poster (see page 17) is describing as a shift from a "society of production" to a "society of information', but it is an integral and enabling part in the shaping of the new concepts as well as the practicalities of the new discourse, especially in the definitions of literacy (which in term shape definitions of culture). What this new form of 'online literacy' will look like has yet to emerge clearly. Some hints can be taken from the literary experiments in the new medium, another reason for their validity and importance. Hypertext fiction with its episodic structure and its self-contained, yet linked, screen sized units encourages a form of "browsing" reading suited for the information society as Poster / Sarrinen & Taylor describe it[33] . Collaborative Fiction utilises and experiments with new online communication and communities and computer-generated writing helps exploring how much of a role computers can play in supplementing (or substituting) human creativity.

Maybe two elements can be suggested as indications of the changes from a 'print literacy' to an 'on-line literacy':

One is a different type of reading; a form of reading which David Weinberger calls referencing, roughly equivalent to what Brenda Laurel has termed browsing[34]. This purposeful extraction of information is associated with the electronic environment and opposed to the more leisurely browsing form of reading. He argues:

> Pretty soon we won't call using online reference works reading. Instead, we'll just call it referencing. This will leave the term reading to describe engaging printed matter where sequence does count, where the order of the presentation is an important part of its value - novels, essays, poems. Reading will become a time of continuity in a fragmented world.

Online reading will also become a more open, public act, happening over a network with the possibility of direct feedback and exchange, a development which, in online literature, is encouraged especially in the collaborative projects discussed in chapter 4 and which not to the liking of every cultural commentator. While, for example, Colette

[32] David Weinberger, "The Balm of Reading", *Wired,* vol.4, no.1 (US - January 1996), p.117.

[33] Mark C. Taylor and Esa Saarinen , ***Imagologies: Media Philosophy*** (New York: Routledge, 1993).

[34] see above, page 36.

Daiute embraces this trend and sees great advantages in a public form of reading for teaching purposes[35], Sven Birkerts sees much of the magic disappear out of the act of reading.[36] Of course it needs to be stressed that one form of reading does not make the other obsolete, but that both can coexist (and have been coexisting) together.

6.4: Literature on Screen - Textual vs Visual

If we do accept that the book as a carrier of factual information might be disappearing, the question that remains to be asked is whether the codex book will also disappear as a physical as well as symbolical carrier of literature. Beyond the question of the forms which literature will take on the computer screen, the question a large part of this study seeks to address, the larger surrounding question is whether the computer is a feasible medium for literature in any form.

Literature is, by definition, predominantly textual, whereas the screen on which electronic text is displayed tends to favour the visual. The distinction between the 'reflective' mediated communication of the text and the unmediated representation, the 'immersion' aimed for by technologies/artforms such as Virtual Reality[37] have been considered above in the discussion of the interactivity of text-based adventure-games. But even if one does not look at VR as the extreme opposite to hypertext, even within text-based hypertext or in fact any computer-mediated text the visual aspect of the page plays a more important role in the visual environment on the screen (in German, appropriately, called BILDschirm) than it tends on paper. (Hyper)Text on screen leans

[35] She argues: "Writing on a computer is more public than the traditional writing environment - and more noisy in a good sense of the word. Although any writing environment can be designed to include discussion and sharing, the classroom with computers may be most appropriate for interaction. (Colette Daiute, *Writing and Computers* (Reading, M.A.: Addison-Wesley, 1985), p.19)

[36] Birkerts, *Gutenberg Elegies*, pp.87-94.

[37] Ryan describes the different approach of a text-based game and a VR adventure game as follows: (Marie-Laure Ryan, "Immersion vs. Interactivity: Virtual Reality and Literary Theory", *Postmodern Culture*, vol.5 no.1 (September 1994), (electronic journal) at: `http://jefferson.village.virginia.EDU/pmc/issue.994/ryan.994.html` (12/1/1996), section 8) In this mode of communication there will be no need for the user to translate her vision into sets of precise instructions. Purely visual thinking will be implemented by means of practical, non-symbolic gestures. As Oimentel and Texeira put it:

> "Simply, virtual reality, like writing and mathematics, is a way to represent and communicate what you can imagine with your mind. But it can be more powerful because it doesn't require you to convert your ideas into abstract symbols with restrictive semantic and syntactic rules, and it can be shared by other people. (17)"

The mystics of ages past (such as Swedenborg, an esoteric philosopher of the XVIII th century) had a term for this radically anti-semiotic mode of communication. They called it "the language of angles". (see also Eco, *The Search for the Perfect Language* (London: Fontana Press, 1995).

towards a more expressive visual element than the conventional aesthetics of print typography allow for and allows us to re-evaluate the relation between the textual and the image elements in a literary text.

Even printed text is never purely transparent, never just textual, it always has a physical side of the representation of the letters on the page, which, however, is in most cases and in the framework of traditional typography subordinate to the dominant textual level. With text on screen, however, there is a possibility of emphasising anew the physical and visual reality of the text, but at the same time there is always the danger of the hierarchy reversing, of text becoming ornament, subordinate to image.If we consider literature as an artform concerned with TEXT, this poses serious questions for this artform.

> *Fiction is perhaps the most closely bound of all the arts to the concept of sequential time.[...] Literature can convey the passing of time because it implies a temporal aspect. (Sharon Spencer)*[38]

There is a long aesthetic tradition to distinguish and oppose painting as something spatial and immediately perceivable on the one hand and literature that has a linear and temporal nature and has to be read. "Literature" here means <u>prose texts</u>, which, due to their often very conventional, solid block typography, do not give much instant visual information.

A strict opposition between *reading* literature on the one hand and *perceiving* paintings on the other cannot be maintained. A printed page has a visual appeal, a text is seen before it is read; similarly a painting has to be 'read' after being seen. The physical presence of a painting makes us believe that an immediate understanding of the whole is possible, but in order to grasp the given information the eye has to move along the surface and read it. Pictorial perception has the same temporal processing that linguistic perception has "with the difference that the ordering of this perceptual sequence is not predetermined by the painting itself"[39] . Readers usually have to follow the order the text imposes on

[38] Sharon Spencer, *Space Time and Structure in the Modern Novel* (New York: New York University Press, 1971), p.XV.

[39] Wendy Steiner, *The Colors of Rhetoric, Problems in the Relation Between Modern Literature and Painting* (Chicago & London: University of Chicago Press, 1982), p.36.

them but can choose the order in which to 'read' a painting.

> All interference, resistance, must be minimised in order to allow the reader a smooth reading of the unfolding linear sequence. The aspirations of typographers serving the letter just are to make the text as uniform, as neutral, as accessible and seamless as possible, and it remains the dominant mode for works of literature, authorative scholarly prose and any other printed form in which seriousness of purpose collapses with the authority of the writer [...][40]

Eric Havelock, a scholar of Greek culture and writing, makes the point that a transparent alphabet, "an alphabet simple enough to learn thoroughly in early youth and unobtrusive enough in its calligraphy that a reader forgets about its physical aspects and reads right through to the meaning beneath",[41] is a vital condition for a truly literate society. Richard Lanham summarises his point of view:

> The writing surface must be transparent. Transparent and unselfconscious. We must not notice the size and shape of the letter. We may in some unconscious way register the [...] conventions but we must not see them.[42]

Print with its centuries long tradition has achieved this goal. The computer, on the other hand, as a writing and reading surface has yet to achieve this 'natural', transparent status. One reason is that it is a very new technology, not yet had time to sink in and is still a very visible and a tool used very consciously. Following Havelock it might be fair to say that we are still a computer illiterate society, struggling with the technology and using it consciously. Another, more fundamental, change is the different way we write on computers, the way in which the computer encourages us to use language in a more 'concrete', visual form.

To use language in a concrete way, i.e. to exploit the fact that the word material is as much an image as a means of textual expression, has long been a common concern of avant-garde writing. Examples date back to Renaissance picture poems, the 'mouse-tail' in Lewis Carroll's *Alice in Wonderland*, or the blank pages in Sterne's *Tristram Shandy*, but can be found predominantly in the late 19th and throughout the 20th century, including

[40] Johanna Drucker, *The Visible Word: Experimental Typography and Modern Art, 1909 - 1923*, p.xxi.

[41] Richard Lanham, *The Electronic Word: Democracy, Technology, and the Arts* (Chicago and London: The University of Chicago Press, 1993), p.19.

[42] Lanham, *The Electronic Word*, p.19.

Mallarmé's *Un Coup de Dés*, Apollinaire's *Calligrammes*, Dadaism, Futurism, Concrete Poetry and the typographical experiments of postmodern authors, *OUT* being one of them. The visual side of written language is used together with the textual meaning , sometimes confirming, sometimes contradicting it. Computer writing emphasises the materiality of the text and makes it a concern not only for a minority of (literary) artists, but a common feature of text-composition.

Similar to the ideal of traditional typography, a dominance of textual over visual message can be observed where visual material is used explicitly in the form of illustration, graphics or photos included in the text. In an article on children's literature, Margaret R. Higonnet refers to what she calls the 'peritext' of a book (in reference to Genette) as "peripheral features such as the cover, titlepage, table of contents, chapter titles, epigraphs, postface, and above all, illustrations."[43] The peritext serves usually merely as a background for the text, is hierarchically subordinate to it, but is, as Higonnet argues "throw[n] in the foreground in children's literature"[44] where the brevity of the actual text puts a much greater emphasis on the non-textual elements than usual. Illustrations are a vital part of children's books, and can, as is the case in picture books for the very young, even substitute the text completely, pop-up books introduce kinetic elements with their movable parts, others are oddly shaped or have holes and flaps behind which surprises are hidden - a whole range of creative uses of peritextual elements that support the textual message of the book as well as being story elements in their own right. They make the book attractive to their readership and encourage children to read and explore not only the narrative but also the book as an object.

Jerome McGann follows a similar line of argument, albeit not in the context of children's books but of illustrated artists' books. In his research on Blake's illustrated poetry and William Morris' book art he uses the metaphor of the double-helix to suggest that linguistic (the text) and bibliographic features (the peritext) are mutually expressive and informing. These books are works of visual art as well as literary texts, their illustrations are not merely decorative but an integral part of the text -reproduced without, they lose a

[43] Margaret R. Higonnet,"The Playground of the Peritext" Children's Literature Association Quarterly, v.15 n.2 (Summer 1990), p.47.
[44] ibid. p.47.

vital part of their meaning[45].

Childrens' and artists' books are always on the borderline between visual art and literature in that they treat the book as an object but also as a carrier for text and are quite unique in their concrete use of the three dimensional object book. Both Higonnet and McGann use examples of what could be called 'marginal' genres, children's literature and artist's books; in mainstream texts the illustrations play a subordinate role. Illustrations are outside the text, there to illustrate it, but subordinate to it.

Computers treat text and pictures in the same way. For them, they are both digital information stored in the computer memory that can be retrieved and realised on the screen at any time. Once an image is digitised, it can be included anywhere in a text (and vice versa, text can be included anywhere in an image. Now that scanning equipment is more widespread , images are available on the internet and image processing and drawing software is affordable and can be used by the layman, the inclusion of images in the writing becomes not only easier but also more and more common.

In her study on *Radical Artifice: Poetry and the Mass–Media*[46], Marjorie Perloff chooses the examples of advertisements to prove the overwhelming impact the visual has nowadays even in traditionally "textual" media like magazines or newspapers. In the early days of printing techniques that made it possible to reproduce photography together with text, the photograph had a merely illustrative function and simply acted as an accompaniment to the important feature, namely the text. But the roles changed gradually, until today the text is often reduced to only a few words, subordinate to the image. And similar to this shift towards a greater use of visual information in newspapers and advertising during the 20th century, we can now observe the same happening in less ephemeral types of text.
In his book *Disappearing Through the Skylight: Culture and Technology in the Twentieth Century,* O.J. Hardison observes this trend in a variety of texts, fictional as well as non-fictional, printed and, above all, electronic. He concludes:

[45] It nevertheless happens frequently that illustrations are left out when reproducing text. McGann himself tells how he had to make sacrifices when editing a *Book of Modern Verse* in 1993. Instead of including colour reproductions of selected poems by Blake and William Roscoe, he had to go for the unillustrated, typographical texts. Colour reproductions are expensive, and, while the cost are justified in the context of an book on visual art, they are regarded a 'luxury' in literature collections and can often not be included in the budget.

[46]Marjorie Perloff, *Radical Artifice: Poetry and the Mass–Media* (Chicago: Swallow Press,1991), pp.61-92.

Once pictures become an integral part of the writing process, the writer's use of language changes. A real estate brochure "written" by computer might have one picture showing a house from the street, another showing the floor plan, and another showing the recreation room during a party. The text accompanying this brochure will let the pictures speak mostly for themselves and concentrate on things that cannot be shown in pictures - financing details, proximity to schools, shops and entertainment, and the like. The "writer" of the brochure is as much a visual composer as a composer of words. In this respect, computers can carry forward the movement to reclaim the visual element in language that is so important a motive for concrete poetry.[47]

What are the consequences of this development? Writing that includes images tends to be less dense and less continuous than languages developed for the representation of complex ideas without images. The vocabulary can also be simpler and remarks, captions and short,discrete paragraphs replace long,descriptive and coherent writing. "The result can be more informal, more colloquial than the traditional language of books."[48] This trend can be observed especially in non-fictional text. Encyclopaedias in their electronic form do not contain more text than their print-based equivalent, even though they have storage space for much more data. Most of it is filled with images and even sounds and videos, accompanied by short texts to summarise the necessary non-visual information.

Even though electronic fiction is still largely text-based (the hypermedia examples that include images are the exception), they follow this 'snippet', episodic writing principle and often not more than one screen full of text before we move to the next. The impact this has on narrative functions such as plot and character developments has already been examined in earlier chapters.

Hypertext is, above all, a visual medium (Michael Joyce)[49]

When Michael Joyce described hypertext as a visual medium, he did not have the direct inclusion of images in mind; after all, his, as well as most other hypertext fiction is predominantly text based. What he meant is that writing on the computer and above all

[47] O.B. Hardison Jr., *Disappearing Through the Skylight: Culture and Technology in the Twentieth Century* (New York: Viking Penguin, 1989), pp. 260 -261.

[48] ibid, p.261.

[49] Michael Joyce, "Of Two Minds: Hypertext Pedagogy and Poetics (Ann Arbor: The University of Michigan Press, 1995), p.89.

writing in hypertext, encourages visual (or spatial) thinking. Yet even his text, with its overview feature and the presentation of the nodes in windows resembling file cards encourages a visualisation of the organisation of the text as a spatial, and therefore visual, structure. The non-linearity he and other authors aim for is best represented visually, as evident for example in the title screen of *Uncle Buddy's Funhouse* which is dominated by the picture of a house with links to different parts of the building / story. Similarly, the interactivity of the 2nd person narration of the text-based adventure game can be made more graspable by the first person viewpoint of visual / 3D computer games.

6.5: Conclusion

There have been suggestions that it is time to take the "literary" out of the discussion of hypertext fiction and to look at it not necessarily as a form of literature but as a new artform altogether[50]. There is a danger in doing that - the danger of seeing hypertext fiction in isolation and of losing the opportunity to place hypertext fiction into a historical context of print experiment and in doing so to gain further insights into both new and old literary forms.

There is also a danger in letting the terms of hypertext and hypermedia merge and thereby lose focus on the debates around *textual* media, and consequently of literacy and literature. As the discussion above has shown, electronic (hyper)text re-evaluates the balance between the textual and the visual information inherent in any text and opens up interesting playful possibilities of a combination / juxtaposition of the two, yet is diametrically opposed to the ideal of unmediated "immersive" experience of Virtual Reality.

I hope this study has avoided both of these pitfalls and has, on a diachronic level, re-incorporated hypertext fiction into an evolutionary (though radical) literary tradition and examined the manner in which concepts which originated in this tradition have been taken over often very literally and without much redefinition. On the a-historical, synchronic level, this study explored some of the possible formats for literature in the

[50] Aarseth, for example, argues that "discussions of the 'literariness' of this or that verbal medium are ever in danger of deterioration into a battle of apologetic claims and chauvinistic counterclaims." (Aarseth, *Cybertext*, p.16).

new electronic textual media: hypertext fiction, collaborative and computer-generated writing. Hyperfiction in the form discussed here will not stay the same (and has already started to develop away from and beyond the examples discussed here). It is beyond the scope of this study, or of any study, to give predictions of how the computer will influence and shape literary forms, but I hope to have pointed out a few shortcomings as well as many of the interesting and exciting questions the current experiments raise. It is in the nature of the subject matter of this thesis that it is a moving, changing and developing form of literary expression. I would like to see my study as part of this development - not as a definitive retrospective, but a part of a growing work in progress.

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