

# hypertextual criticism

comparative readings of three web  
hypertexts about literature and film

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*Electronic text: words on a computer screen. There are no pages to turn; no corners to dog-ear. Do you miss the smell of freshly printed paper? The soul of the text has migrated to a new body; a body you experience in the soft click of a mouse, the glow of the screen and the hum of the machine. Yet the words and their content are still the same, aren't they?*

*Are they?*

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# introduction

Writing, in its widest sense, has existed for some 20,000 years. (Gaur 1984: 35)

Over the course of these millennia the technology of writing has been constantly developing. We have written on stone, wood, metal, hides, leaves, bones, cotton, pottery, paper – and now, we very often write electronically.

In the late twentieth century, computers are used for many kinds of writing in the literary and academic worlds. They serve as simple word-processors to produce conventionally printed novels, articles, poems and dissertations. They are also a medium for electronic literature that is written in a form that can only be read on a computer. Poets, novelists and dramatists use computers to develop the old genres and to create new ones. Some scholars write electronic dissertations and articles, and some teach and discuss their work using computers.

In this thesis, I will study three examples of how scholars use *hypertext* to write about literature and film. The word hypertext was first coined by Ted Nelson in the 1960s. Nelson explains the word like this:

Well, by “hypertext” I mean *non-sequential writing* – text that branches and allows choices to the reader, best read at an interactive screen. (Nelson 1993:0/2)

The hypertexts I will discuss are published on the World Wide Web<sup>1</sup>. The Web, as it is affectionately nicknamed, is itself a huge hypertext, consisting of many separate but interlinked Web pages. Web pages are electronic documents that can contain text, images, sound, video and programs. They are located on

individual computers all over the world, and can be read by anyone who has access to a computer connected to the Internet. In each Web page, certain words or phrases are highlighted or underlined. By clicking the mouse on these words, the reader activates or follows a *link*, thereby calling up a new Web page on her or his screen. In this way the hypertext branches according to the links the reader chooses to follow, as in Nelson's words above.

This study is structured around detailed analyses of three concrete Web hypertexts about literature and film. Although there has been an increasing amount of critical writing about hypertext over the last decade, a lot of this literature is purely theoretical, discussing general visions for hypertext without more than passing references to the hypertexts that have already been written. The close readings that do exist are mostly of hypertext fictions, and especially of Michael Joyce's classic *afternoon, a story*, which has been devoted a chapter in several books about literature (Bolter 1991, Douglas 1994, Landow 1997, Aarseth 1997). Other hypertexts, and especially non-fiction hypertexts, are rarely discussed in detail.

I have attempted an opposite approach in this thesis. The analyses of three non-fiction hypertexts form the backbone of the study. Since there are few close readings of specific hypertexts, especially of non-fiction hypertexts, I have had to develop my own methods of interpretation, using elements of the more general theories about hypertext as tools in my readings.

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<sup>1</sup> There are many other hypertext systems, but this study is limited to hypertext as it is found on the web.

The three Web hypertexts about literature that I have chosen to analyse were written for different purposes. In literary studies we produce many kinds of texts: readings, essays, textbooks and articles are just a few of the genres we conventionally use. Usually we choose a genre depending on what we want to write about and for whom we want to write. Hypertexts can have the same goals as conventional texts. The hypertexts I will analyse belong to three different genres in literary studies: they are a tutorial, an essay and a close reading. By choosing to study three hypertexts written for three different purposes I hope to show how a hypertext's structure and style correspond to the topic and the intended target audience of the text.

First I will explore a tutorial on Isaac Rosenberg's poem "Break of Day in the Trenches" which is a part of the *Virtual Seminars for Teaching Literature* project at Oxford. This tutorial is written for students who are unfamiliar with the topic. It is a resource on and introduction to First World War poetry in general and the poem "Break of Day in the Trenches" in particular.

As my second example I have chosen "E-Literacies: Politexts, Hypertexts, and Other Cultural Formations in the Late Age of Print". This hypertext aims to discuss and criticise an area of literary studies, and in its tone and strategies it has many similarities with the familiar genre of the essay.

The third type of text I will study here is a close reading. I wished to analyse a hypertextual reading rather than a conventional linear one, but these are scarce on the Web. I have therefore chosen to analyse an interpretation of a film sequence

rather than of a work of literature: Adrian Miles' "*Singin' in the Rain*: a hypertextual reading."

These three readings form the bulk of this study. Between the readings I have placed short, more general chapters which form connections between the readings. In these I draw on theories about hypertext to set the texts I read in context.

To understand what hypertext is today on the Web, it is useful to examine the history of hypertext. Therefore, my first chapter is an outline of the development of hypertext.



# the history of hypertext

Hypertext-like structures have existed for centuries. Encyclopaedias, newspapers and reference books with their tables of contents, cross-references and indices are in effect printed hypertexts where readers must manually look up the links rather than just clicking a mouse on highlighted text. There are also literary examples of printed non-linear texts, such as Vladimir Nabokov's *Pale Fire* or Raymond Queneau's *Cent mille milliards de poèmes*.

However, the term hypertext is primarily used about electronic literature. Vannevar Bush's idea of the *memex* is generally agreed to be the starting point for these non-linear texts' movement away from paper.

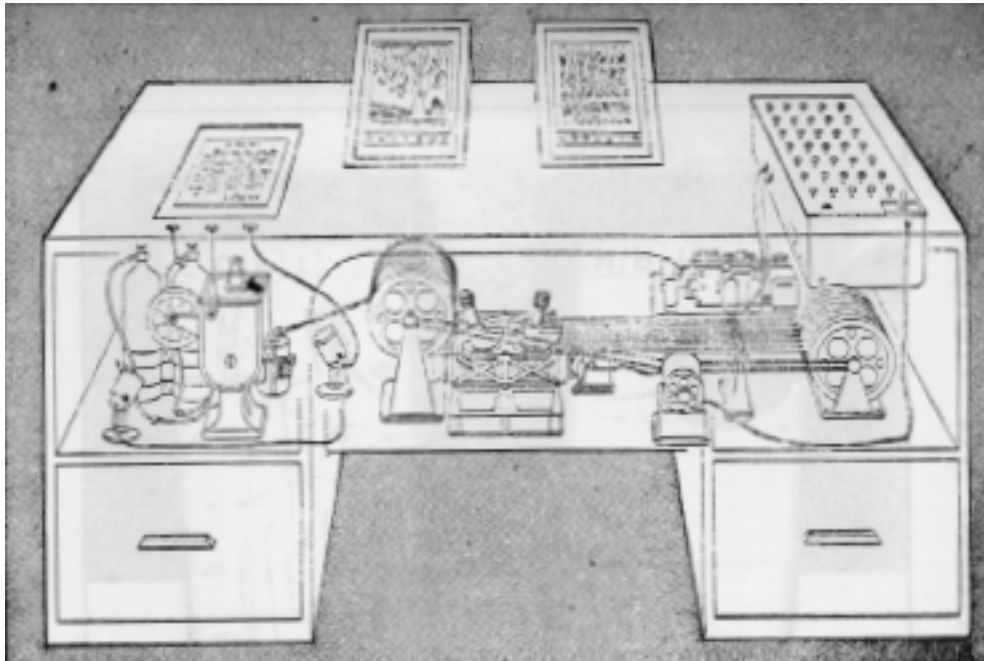
## Vannevar Bush and the memex

Vannevar Bush (1890-1974) was one of the developers of the Differential Analyzer, an analogue computer that was the United States' most important during the Second World War (Owens 1986:3). Soon after the war, in 1945, Bush published the article "As We May Think", which is considered to be the first description of hypertext.

In Bush's opinion, one of the greatest problems for thinkers is the information overflow. He argued that "Publication has been extended far beyond our present ability to make real use of the record." (Bush 1945:89) Criticising the "artificiality of systems of indexing" (101), Bush proposed a mechanised system that would find

information by association, as the human mind does, rather than by indexing. This system he named the *memex*:

A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. (102)



**Figure 1: The memex as illustrated for the first publication of “As We May Think” in the Atlantic magazine**

Bush visualised the memex as a personal mechanical filing cabinet that was also a desk. Books and pictures would be transferred to microfilm, and stored within the desk. The desk would have two screens, each of which could display pages from the microfilm books. Information from the memex would be retrieved using either conventional or associative indexing. The user would also be able to add comments and margin notes, and to link separate items, creating permanent ties between them. Bush called series of such links *trails*, and envisioned a whole new profession of *trail-blazers* who would organise information in memex encyclopaedias.

## Ted Nelson and Xanadu

Bush's vision attracted a lot of attention in 1945, but the memex was never realised. When Bush wrote a follow-up to his original memex article in 1967 (Bush 1967), Theodor H. Nelson, then a sociology student doing a term project in computer science (Keep et al. 1995: hf10155.html<sup>2</sup>) had already coined the term *hypertext*<sup>3</sup> for his digital version of the memex. Nelson's vision of *Xanadu* has since become mythic. Rather than Bush's individual library, Nelson envisions a global networked online library, a "docuverse" where the user has access to *all* published material, and is "billed automatically for the services and delivery of copyrighted materials" (Nelson 1972: 249). Nelson's focus on the network rather than the individual workstation proved closer to the Internet we now know than Bush's memex was. But Nelson's Xanadu was more sophisticated than the Internet and the World Wide Web:

(..) contrary to legend, Project Xanadu was NOT trying to create the World Wide Web. The World Wide Web is precisely what we were trying to PREVENT. We long ago foresaw the problems of one-way links, links that break (no guaranteed long-term publishing), no way to publish comments, no version management, no rights management. All these were built into the Xanadu design. (Nelson 1996: XuPageKeio.html)

Nelson criticised Bush's concept of trails of being unnecessarily sequential, and believed this was caused by Bush's interest in using microfilm.

In Bush's trails, the user had no choices to make as he moved through the sequence of items, except at an intersection of trails. With computer storage, however, no sequence need be imposed on the material; and, instead of simply storing materials in their order of arrival or of being noticed, it will be possible to create overall structures of greater useful complexity. These may have, for instance, patterns of branches in

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<sup>2</sup> When quoting from Web based essays, I will use the file name of each page, rather than the title. This makes it easier to find the relevant page without going through several other pages. The full address of each web essay can be found in the bibliography. To show which words and phrases are link descriptors (anchors leading to other pages) these words are underlined.

<sup>3</sup> Nelson first used the term hypertext in an article published in 1965: "A file structure for the Complex, the Changing and the Indeterminate." *Proc. Association for Computing Machinery*.

various directions. Such non-sequential or complex structures we may call “hypertext.” (Nelson 1972: 253)

Bush’s associative yet sequential trails and Nelson’s a-hierarchical network represent two different ways of structuring hypertext.

## **Hypertexts about literature today**

In the decades since Bush and Nelson dreamed of the future, electronic hypertext has become a reality. The Web fulfils many of the goals of both the memex and Xanadu, and has grown and is still growing at a remarkable pace. At the same time, hypertext has become proliferate on our personal computers, built into software applications or sold on CD-ROMs or diskettes: electronic encyclopaedias, help files for word processors, annotated versions of literary classics and hypertext fictions.

One of the most common uses of hypertext in literary studies is in annotated editions of classical works. This paper-based form of hypertext has been transferred to electronic media almost unchanged. The many CD-ROM editions of Shakespeare’s plays and other works are very similar to the printed editions we know. Notes to each line of the text can be viewed on your screen; there are introductory essays and there is often some historical background to the work. These electronic annotated editions do take advantage of the medium in some ways, usually including a search function, sometimes allowing concordances to be generated and often including video and sound clips of performances or readings of the work.

There are examples of this kind of work on the Web, though few of them are as professional as the commercial CD-ROMs. This is in part due to a lack of time and money, since users generally don't pay those who create content on the Web. Multimedia content is also limited on the Web, both because of the long download time and because of copyright restrictions.

Although Web-based annotated editions are in general less professional than commercial CD-ROMs, they are not necessarily less valuable. Many literary resources on the Web make up for what they may lack in polish by their innovative approaches, thorough research, the opportunity to interact in discussion groups, through constant development, multiple viewpoints, enthusiasm or in many other ways.

Many literary texts in the public domain are freely available in electronic format through the *Gutenberg Project* (Hart 1972-98) and other collections. Annotated texts are also available in many places. *The Perseus Project*, for example, is a large and growing

digital library of resources for studying the ancient world. The library's materials include ancient texts and translations, philological tools, maps, extensively illustrated art catalogs, and secondary essays on topics like vase painting. (Crane 1998)

*The Perseus Project* is edited by scholars and is intended primarily as a resource for researchers. Other works are being annotated by their fans, as at the ongoing community *The Republic of Pemberley*, which is run by "volunteers obsessed with Austen for others who are similarly afflicted." (Robens and Bellinger et.al. 1998: "japapers.html) Here you can find Jane Austen's works in electronic form, and with many hypertextual annotations, but also several discussion groups, online chat

rooms, reviews of other books the community likes, sequels they have written to their favourite books, group reads where many members read the same book and discuss it online, and even advice columns where “Lady Catherine de Bourgh” will answer your questions. Although this salon of the digital age is a tight-knit and active community, anyone with Web access can register as a member.

*The Republic of Pemberley* is in some ways similar to a CD-ROM annotated edition, but it has many additional features which are impossible without the connection between people that is allowed by the Web. This literary community living a rich and constantly evolving textual life is a striking example of a new way of discussing and reading literature.



**Figure 2: The site map of The Republic of Pemberley – each “place” on the map can be clicked upon, and links to an area of the site.**

Another way annotated editions are extended on the Web is in hypertexts written as pedagogical tools; as supplements to traditional lectures or as stand-alone

tutorials used in distance education. Examples of this can be found at the *Virtual Seminars for Teaching Literature* project at Oxford. The tutorials here introduce various aspects of the study of First World War poetry, and are intended to be worked through by individual students. There is also a discussion group (although it is not very active), and an extensive and growing archive of the readers' impressions of one particular poem, Isaac Rosenberg's "Break of Day in the Trenches." This tutorial is the object of my first reading.

# first reading: **virtual seminars for teaching literature**

*Virtual Seminars for Teaching Literature* consists of four Web-based tutorials on British First World War poetry as well as a large archive of material relating to the War. The tutorials are constructed by Stuart Lee and Paul Groves.

I have chosen to study the second of these tutorials, which is about Isaac Rosenberg and his poem “Break of Day in the Trenches.” This was the first virtual tutorial developed in this project, and it went online in August 1995.

## **Circular structure**

The “Break of Day” tutorial is structured as a cycle through background information, beginning and ending with the poem. The opening page<sup>4</sup> explains the structure like this:

Below is a copy of Isaac Rosenberg’s poem *Break of Day in the Trenches*. To begin with you are asked to read the poem and record your initial reactions in the space provided at the end. Once you have done this please choose ARCHIVE to store your comments. You may then proceed to the HYPERMEDIA EDITION of the poem.

The aim of this World-Wide-Web service is to study the way a reader’s impressions of a text are altered by discovering the context in which the poem was originally written. Not only will you have the option of looking at a hypermedia edition of the poem, but also material on Rosenberg’s life, analogous material, and the poem’s historical context. At the end you will be asked to read the poem again and record your new analysis. (Groves and Lee 1995: poem.html)

This basic structure gives the reader a purpose, a drive towards the completion of a task. Although you can enter the tutorial without recording your impressions, the

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<sup>4</sup> I will use the Web convention of calling each node in the hypertext a “page”.

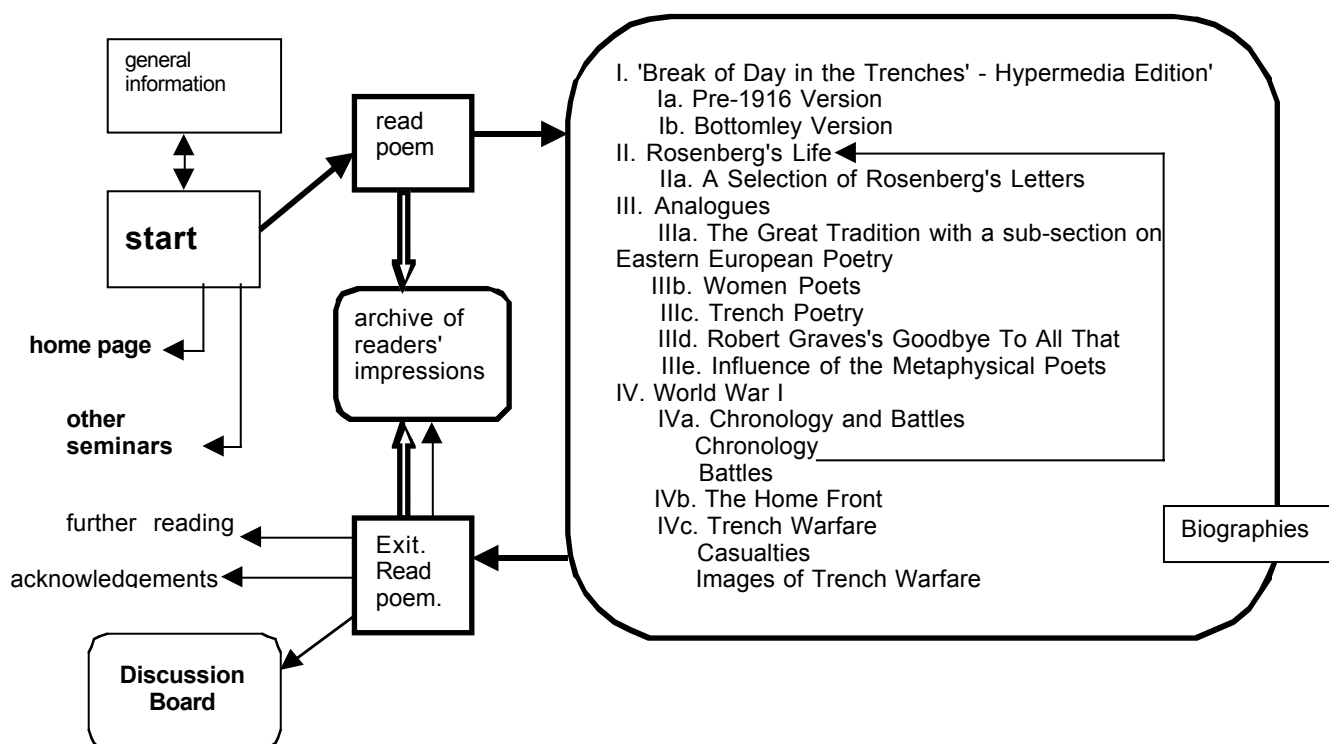


archives (which you can read after completing the cycle) attest that a great many readers have taken the time to share their thoughts.

As the introduction I quoted above states, the bulk of the tutorial aims to set the poem into a context. Although the “hypermedia edition” of the poem is the first page presented to you after you have recorded your impressions, a great deal more space is given to Rosenberg’s life, to war history and to other poets and their poems than to the discussion of “Break of Day” itself. Even the grammar of the sentence I quoted above seems to privilege the contextual material: “*Not only* will you have the option of looking at a hypermedia edition of the poem, *but also* material on Rosenberg’s life, analogous material, and the poem’s historical context” (my emphasis). This tying of history to poetry is one of the underlying tenets of all the seminars. The First World War context material is not merely meant to help you to understand Rosenberg’s poetry. The opposite is at least as important. Poetry is used to teach you something about the First World War, and is presumed to give you a more direct channel to the participants’ feelings than historical facts and dates alone. As Lee writes in the section on trench warfare: “[Rosenberg’s] greatest means of expressing the horror and despair of the trenches was in his poems.” (Groves and Lee 1995: trenchw.html)

## The hierarchy within

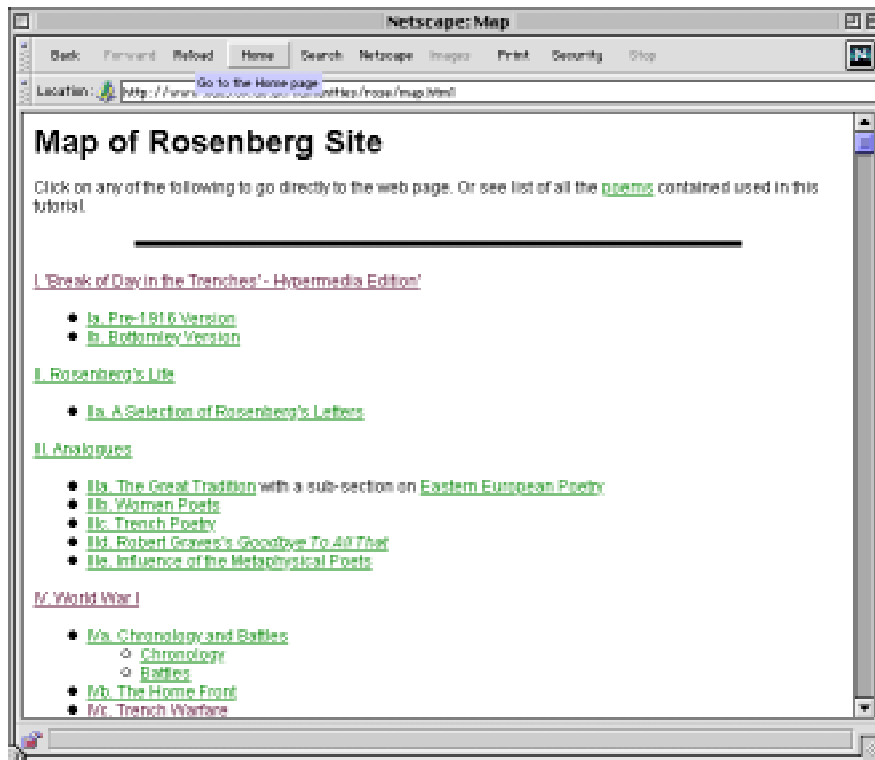
The tutorial is very hierarchically structured, once you are within the cycle which ties together the beginning and the end of your reading. The map page and the icon bar titled “Contextual Information”, show three categories in addition to the hypermedia version of the poem: Rosenberg’s Life, Analogues and First World War history.



**Figure 3: Map of “Break of Day” tutorial**

The map I have set out in Figure 3 only shows the circular structure of the outer layer. The thick arrows show the main path through the cycle. The double arrows pointing from the two readings of the poem “Break of Day” indicate that the reader sends information to the archive about her or his impressions of the poem. The single arrow from the final reading of the poem shows the link to this archive, allowing the reader to see other people’s comments.

In Figure 3 the bulk of the tutorial is shown inside the large rounded rectangle. This section is totally hierarchically structured, as shown in the table of contents, called a map<sup>5</sup> in the tutorial (see Figure 4). Each heading in this “map” corresponds to one page. Lateral linking between the four sections is permitted through an icon bar (which I discuss in detail on page 19) with links to each of the four main pages in the table of contents (the Hypermedia edition, Rosenberg’s Life, Analogues and the First World War) and also to the map itself. Apart from this, the links follow a strict tree structure, narrow at the top level and spreading out into more pages at a lower level.



**Figure 4: Screenshot of the table of contents or “map” of the “Break of Day” tutorial.**

<sup>5</sup> The metaphor “site map” is one of the spatial metaphors that have been built up around reading hypertext: we *navigate* from *space to space* and therefore must need a map. If we compare the site map of this tutorial (Figure 4) to the map of *The Republic of Pemberley* (Figure 2) it seems farfetched to call the tutorial’s overview a map at all.

There is only one exception to this hierarchy: the links leading from various points in the section on the chronology of the war to corresponding points in Rosenberg's personal biography. But apart from these cross references, and the icon bars' lateral links, the structure of this section of the hypertext is very similar to conventional printed books.

The lack of cross-referencing is strange at times. A link would seem natural from the page on "The home front" to the section on women's poetry, for instance. It is also surprising that the only link to the small section on "Eastern European War Poetry" is from a list of poems in the section on "The Great Tradition."

The hierarchy which at first seems clear is also confused by the use of very long pages. For instance, the page titled "Break of Day in the Trenches – Hypermedia Edition", is seven printed A4 pages long. In addition, each page covers a number of very different topics. The "map" offered (see Figure 4) unfortunately only gives links to individual pages, and not to the many sub-topics within each page.

The map is not really a map of the information in the tutorial, but of the separate Web pages. Instead of only using it, let us try to see what sort of structure is built up by the many links within each page.

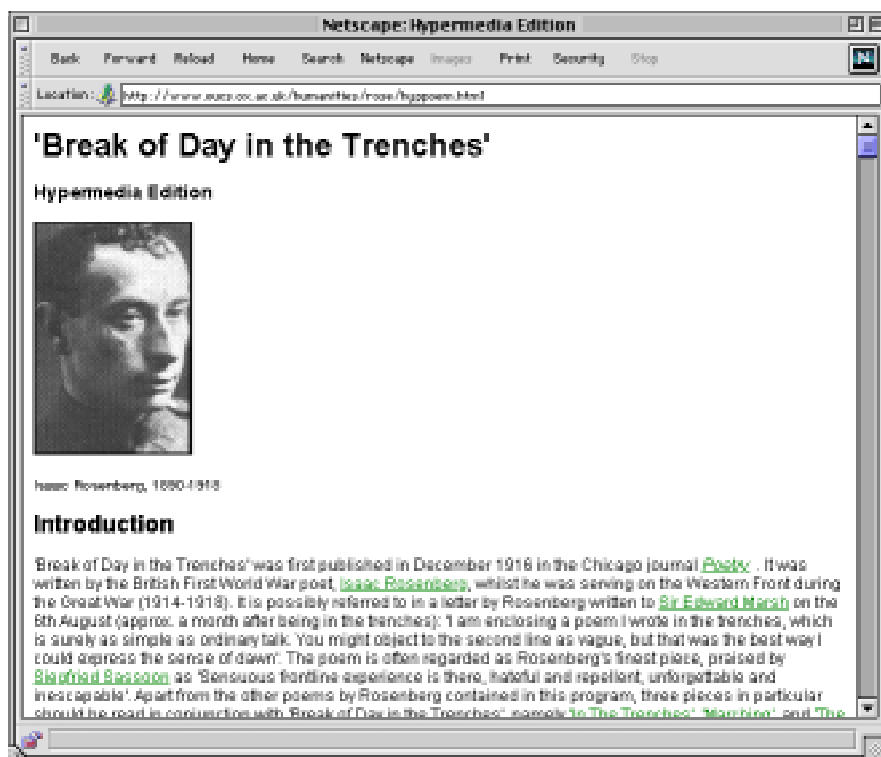
### **Links in the hypermedia edition page**

On the map of the tutorial (Figure 4), the "hypermedia edition" of the poem is marked as having only two sub-categories, which are two different versions of the poem. These are two separate pages that have links leading to them from the "Hypermedia edition". However, the structure is a lot more complex than this

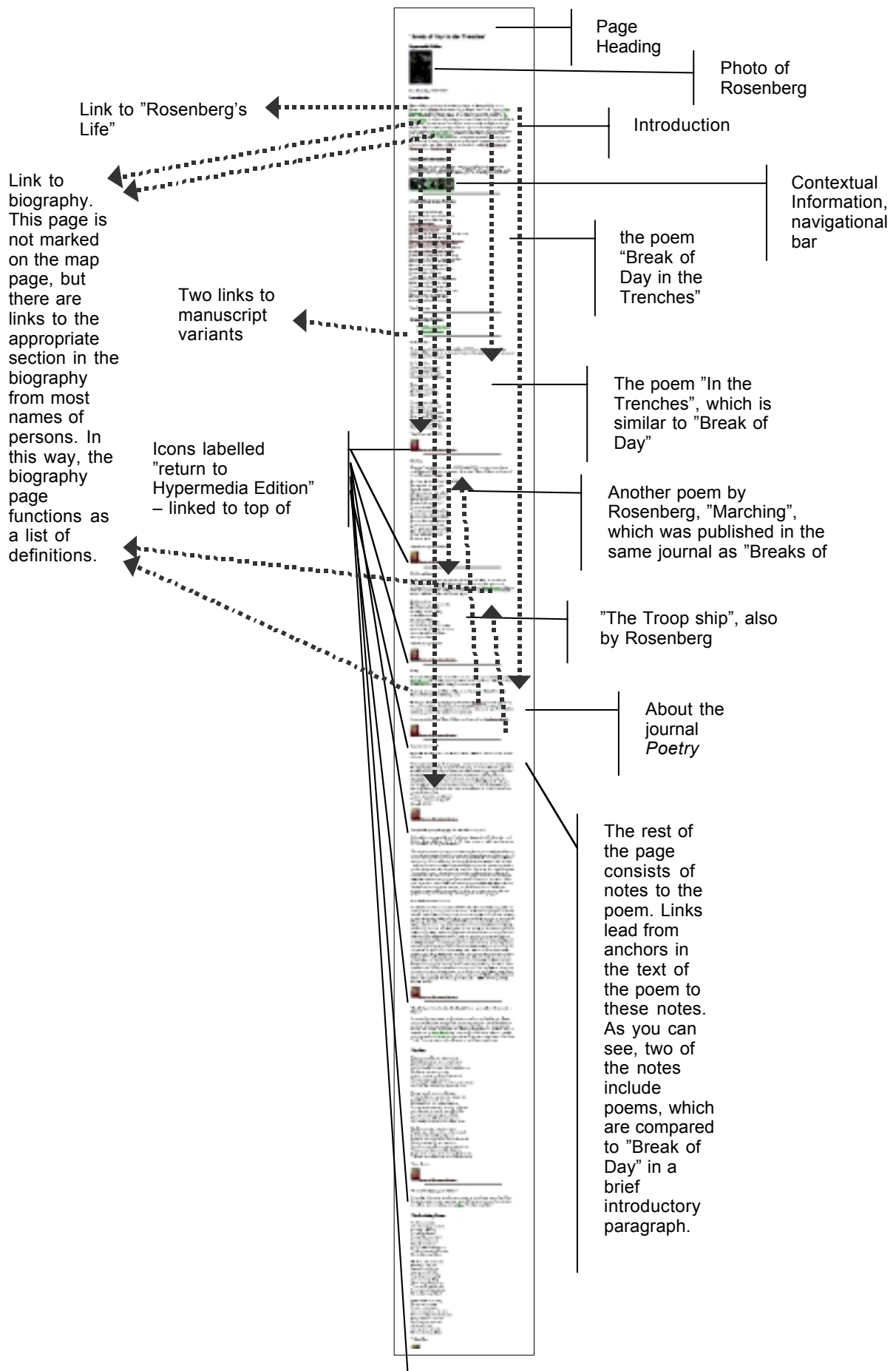
suggests. The single, long page called the “Hypermedia edition” could just as well have been divided into several separate pages. The page does not make a lot of sense if you read it from beginning to end, because the links back and forth treat sections of the page as independent parts.

The hypermedia edition is the first page you arrive at after you have recorded your comments about the poem. Figure 5 shows a screen shot of what the reader first sees when arriving at this page, before following links or scrolling down.

A photo of Isaac Rosenberg is prominent at the top of the page, captioned by his name and date of birth and death. This instantly places the historical person Rosenberg at the centre of attention, which is completely in line with the focus on history and context throughout the tutorials.



**Figure 5: A screenshot of the "Hypermedia edition" of the poem.**



**Figure 6: A map of the whole "Hypermedia edition" page with links.**

The “hypermedia edition” continues with a short “Introduction”, explaining when the poem was written, and quoting what Rosenberg wrote about the poem in a letter to a friend. There are also in-text links (links from words or phrases in a paragraph) from this paragraph to three other poems by Rosenberg which have similarities to “Break of Day”. These poems are further down on the same page.

As you can see from Figure 6, the rest of this page consists of short, relatively independent blocks of text. There are five poems, each with a short paragraph explaining the poem’s relation to “Break of Day in the Trenches.” There is a description of the journal Poetry, where the poem was first published, and there are two excerpts from criticism of the poem. The Introduction contains links to some of these sections, and the rest are linked from the poem itself, similarly to conventional annotations. Each section is preceded by a small icon representing the Hypertextual edition, and which is a link anchor<sup>6</sup> leading back to the top of the page.

## The navigational icon bar

Beneath the Introduction is an icon bar labelled “Contextual Information” (see Figure 7). This is the main navigational tool in the tutorial. It consists of a bar of small pictures or icons, each linking to one of the main categories of the “map” page shown in Figure 4. A photo of Rosenberg leads to the page containing his biography, an icon showing a page with stylised lines of print on it leads to the hypermedia edition, a photo of a man in uniform leads to a page entitled

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<sup>6</sup> The departure point of a link is often referred to as its *anchor*, and its destination page as its *target*. The words (or the image) that are highlighted as part of the anchor can be called the link descriptor or the anchor descriptor.

“Analogues”, which deals with other First World War poetry, and a facsimile of a propaganda poster from the First World War leads to the section on war history. The icon referring to the page you are viewing is not visible on the bar. In addition to icons leading to the pages on the second level of the hierarchy, there is a button leading to the map page, and another labelled “exit”, which completes the cycle.

### Contextual Information



**Figure 7: The icon bar in the “Break of Day in the Trenches” tutorial, as seen on the page titled “Rosenberg’s Life”.**

The navigation bar works in several different ways. It delineates the layout of the page and allows easy access to other sections of the hypertext. But as a visual element on most pages, the navigation bar and the line beneath it become more than this: they are what Richard Lanham calls “visual topoi” (Lanham 1993:76), a new rhetorical figure (I discuss Lanham’s work in more detail on page 71). As a rhetorical figure, the bar and line suggest that the page the reader is viewing is part of an extensive totality. They also indicate a willingness to let the reader choose her or his own path through the tutorial. In addition the bar becomes an visual identifying mark of the tutorial.

Although the bar is used as a layout element in most pages, it is hard to find a consistent pattern for its use. Its position varies on different pages, and sometimes it is altogether missing. Usually the bar is positioned beneath an introductory text, sometimes so far down that you can’t see it until you scroll past the first paragraphs.



One way of interpreting the bar's role in the page's layout is as an end-line for the first and main section of the page. This is further accentuated by a horizontal line drawn beneath the bar. Alternatively the words "Contextual Information" can be read as a heading for the section beneath the icons, rather than or as well as the heading of the bar itself. As a third possibility the bar and line can be seen as a hiatus separating contextual information from the poem itself, or secondary from primary literature. The contextual information would then be the text above the bar, so in the "Hypermedia edition" it would be the introduction setting the poem into context; the photo giving a face to the poet and the icon bar providing links to other contextual information.

Another possible interpretation is that the section above the bar and line is the main section of the page in the sense that there are links from this section to all the other sections on the page. This is not the case on all pages, but when it does occur, it echoes the hierarchical structure of the tutorial.

## **Hypertextual annotation**

Linked annotation is common in hypertextual literary criticism, as I discussed in the previous chapter. But in this case, hypertext's imitation of print annotation is inferior to the conventional versions. When you read the notes to the poem in this "Hypermedia Edition", you see nothing but the notes. If you were reading an annotated print version of the poem, both notes and the poem would be printed on the same page. The irritation of losing the poem to read the notes is added to by the clumsiness of the link returning from the note: you aren't sent back to the point

in the poem you left, but to the top of the page. The text of “Break of Day” isn’t even visible from there, unless you have a very large screen.

The content of the notes is not entirely consistent. Two of them are excerpts from a book by P. Fussell. The first note quotes a paragraph by Fussell discussing the image of “a queer sardonic rat.” The second note is a longer excerpt from the same book, introduced as providing “an overall view of the poem and its relation to the pastoral elements.” (Groves and Lee 1995: [hyppoem.html#as](#)) Fussell particularly discusses the meaning of the image of the poppy, but approaches a full analysis of the poem. The note is linked to the lines “As I pull the parapet’s poppy/To stick behind my ear,” but is equally relevant to other lines about poppies further down in the poem.

The other two notes point out intertextual allusions or, to use a word from the tutorial, analogues to the poem. While they are interesting in themselves, they are of another character than the first two notes.

The long pages in this tutorial are in many ways equivalent to a printed annotated edition, where fairly unconnected essays, notes and comments follow one upon the other. Although such works are a lot less linear than most codex books, the individual sections must form a sequence, although they are not necessarily read in the sequence in which they are printed. In electronic hypertext even this linearity is unnecessary, yet the “Break of Day” tutorial seems to cling to it.

# structures of hypertext

The “Break of Day” tutorial uses two basic forms of hypertextual structure: the hierarchy and the cycle. Most sites on the Web are structured hierarchically. A top level home page (which will usually be the first page that readers see) has links to a number of second level pages, and each of these again may contain links to more pages.

One main object of the “Break of Day” tutorial is to provide organised and easily navigable information and discussions of particular topics. *The Perseus Project* (which I mentioned on page 9) is another example of this kind of electronic resource. Like the tutorial, *The Perseus Project* is basically hierarchically structured. It also has various navigation aids such as search tools, a table of contents and overviews. The clear and easily searchable structure we see in these resources is equivalent to the external (that is external to the content) navigation aids that are common in conventional printed textbooks: clear chapter headings, cross-references and a thorough index.

But literary scholars write many kinds of text that don't conventionally have these kinds of overviews. A close reading, for example, is its author's expression of her or his interpretation of a text. Close readings rarely have extensive navigation aids, whether they are printed conventionally or written as hypertexts. Instead, the reader follows the path (or in the case of hypertext, the paths) that the writer has built through the material. By forgoing the navigational tools that allow the reader to surf mindlessly through the words, such a text forces the reader to read it thoroughly.

This lack of explicit navigation aids need not deter knowledgeable readers from finding the information they need. Discussing experiments conducted by himself and Paul Kahn, George Landow describes how readers who were experts on the contents of a hypertext could find information faster in a given hypertext than could readers who were experts on the system (complete with navigational and searching tools<sup>7</sup>) in which the hypertext was written:

orientation by content seems able to solve potential problems of disorientation caused by the system design considered in isolation (..) In relying too heavily upon system features, they [the designers] implicitly made the assumption that the system, rather than the author, does most of the work. In doing so, they tended to ignore the stylistic and author-created devices that made the search quick and easy for a majority of users. (Landow 1997: 121)

How-to guides such as Brian Pfaffenberger's *The Elements of Hypertext Style* recommend not organising hypertexts a-hierarchically. Pfaffenberger calls it "the semantic net", and opposes it to hierarchical structures and to "the forced march" where the reader has very limited choices.

In a semantic net, you give up the idea of imposing a structure onto your Web (and therefore on your readers); instead, you allow your Web to grow organically, adding links and pages as the need arises. You aren't thinking of methods of development, flatness, or depth. You're only thinking of ways in which you can enrich the linkage density of you Web by multiplying the conceptual links. (..) Unless you have some compelling artistic or literary reason for employing this model, you should avoid it – or at least provide plenty of navigation hints for your beleaguered reader. (Pfaffenberger 1997: 43-44)

This view, which matches most thinking about the Web, insists that ease of navigation is the highest priority, and assumes that structure equals hierarchy.

It is hard to say whether so many Web sites use this hierarchical, easy-to-search structure because this is how people prefer to read online, or whether people read

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<sup>7</sup> Landow was at the time (1991) working with the Intermedia system, and not with the World Wide Web. In the latter, far fewer navigational aids are built in to the system. There are still a lot of

this way because that's the way most Web sites force us to read. Either way, studies show that most readers don't *read* Web pages, they scan them, as Jakob Nielsen concludes in an issue of his online column "Alertbox":

### **How Users Read on the Web:**

They **don't**.

People rarely read Web pages word by word; instead, **they scan the page**, picking out individual words and sentences. In a recent study John Morkes and I found that 79 percent of our test users always scanned any new page they came across; only 16 percent read word-by-word.

As a result, Web pages have to employ **scannable text**, using

- highlighted **keywords** (hypertext links serve as one form of highlighting; typeface variations and color are others)
- meaningful **sub-headings** (not "clever" ones)
- bulleted **lists**
- **one idea** per paragraph (users will skip over any additional ideas if they are not caught by the first few words in the paragraph)
- the inverted pyramid style, starting with the conclusion.
- **half the word count** (or less) than conventional writing (Nielsen 1997)

This style of writing and the standard hierarchical structure is well suited to informational or promotional sites. The aim of such sites is often to allow readers to find the information they are looking for as quickly as possible, and on commercial sites to give readers fast information about other products that they might be interested in paying for. Some of the tactics Nielsen recommends can be found in the "Break of Day" tutorial, such as bulleted lists and frequent and meaningful subheadings.

However, many texts in literary studies are not primarily informational.

Interpretations, discussions, argumentations and so on are not written for a reader who skims quickly through them, looking for fast information. So it seems likely that many Web hypertexts about literature need a different structure and style than

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conventional tools, which are used in a great many Web sites: maps, overviews, icon bars and

that recommended for Web sites where the aim is to present information or to promote a product.

The general idea that a-hierarchical hypertext has no structure at all, that we saw in the citation of Pfaffenberger on page 24, is to a large extent due to our lack of experience with reading hypertexts. As Mark Bernstein writes, “the problem is not that the hypertexts lack structure but rather that we lack the words to describe it.” (Bernstein 1998b:21) In the three readings in this study one of my aims is to try to develop such a vocabulary, naming the tacit knowledge of Web and print conventions that we take for granted, and identifying other structural elements and relationships as I come across them.

In his article “Patterns of hypertext” (Bernstein 1998b), Bernstein gives many concrete examples of the types of pattern that can be found in both fictional and non-fictional hypertexts today. In addition to hierarchical patterns such as the tree, the sequence and the sieve, he identifies several other kinds of hypertextual structure, such as the cycle, the counterpoint, the mirrorworld, the tangle and the montage.

Many of Bernstein’s examples are taken from hypertext fictions, which very often use a-hierarchical structures. But by what methods can scholarly hypertexts like the ones examined in this study be structured? David Kolb asks a similar question: “Can we do philosophy using hypertext?” (Kolb 1994: 323). Kolb recognises that hypertext can perform functions such as emphasising the structure and outline of standard essays, cross-linking references in a “virtual

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clear hierarchical structure are a few of these.

library” and constructing enhanced annotated classics – these are all tasks that can be performed using a hierarchical system. But Kolb questions whether argumentation is possible in hypertext, without the linear structure we are familiar with from print:

Hypertext appears at best an informational convenience, but its shapeless depth must not be allowed to weaken argumentative linearity, or philosophy will be reduced to rhetoric. (Kolb 1994a: 325)

On the other hand Kolb points out that many philosophical works are not strictly linear. Plato’s dialogues, medieval commentaries, Kierkegaard, Nietzsche, Wittgenstein and deconstruction are a few of the examples he names.

While Kolb remains a sceptic, he makes some suggestions as to what might be important in a philosophical hypertext, both in examples (in the hypertext version of the essay) and in the printed essay.

[..] certain propositions might run through the text the way themes run through a song, so that the reader must encounter them. The author could structure the text so that the reader constantly returned to certain claims, but the structuring would not necessarily make these claims “the” conclusion. Reading a philosophical text might gradually reveal a plot, a situation, or a set of characters even if not read in a unique linear fashion. (Kolb 1994a: 339)

This concept of the cycle, where the reader constantly returns to certain pages, is central to hypertext. Even in a hierarchically structured hypertext, the reader is likely to return to the home page or to other pages and then to choose different links out than she or he did the first time round. Or as in the “Break of Day” tutorial, an otherwise hierarchical hypertext can build one great cycle around the main structure, strengthening the unity of the text. Hypertexts can also do away with hierarchy altogether, for instance using the cycle as a basic pattern, as described by Kolb above.

Yet Kolb seems to retain some of the feeling that that which is not linear or hierarchical has no structure: “We should not substitute association for all kinds of questioning and discursive moves,” he writes in a later article (Kolb 1997: 32), stressing that “a hypertext must be more than a sequence of random associative links” (Kolb 1997: 31). However, “random associative” is an oxymoron. Association is not random, although it can be individual, and hypertext fictions, which Kolb seems to be referring to, are rarely either random or purely associative structures. This confusion of associative with random lies at the core of the widespread distrust of a-hierarchical structures in hypertext.

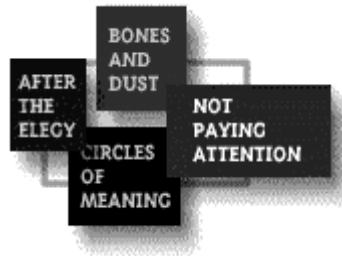
Kolb’s scepticism is balanced by his many concrete suggestions for a-hierarchical structures. Instead of constructing one-step links between individual pages (the assumption that this is common in a-hierarchical hypertexts corresponds to Pfaffenberger’s description of the “semantic net” that I cited on page 24), Kolb calls for larger patterns, spanning several pages and ultimately the whole hypertext:

There should be large structures, echoes, returning themes, transformations and recapitulations. (..) The single node should not stand alone, not should a single level of linking. There should be larger structures and discursive moves as well as ways to become aware of them and their relations and links. (Kolb 1997: 31-2)

As a way of achieving these greater patterns and structures, Kolb suggests that a hypertext could consist of regions, a group of pages which is meaningful in itself, but also plays a part in the larger structure. Kolb also calls for typed links, and as I read him, he would like a map view of the hypertext to be available while reading, to show relationships between regions and individual pages. In Storyspace, the hypertext authoring and reading environment which Kolb has used to write the



hypertextual version of “Socrates in the Labyrinth,” map views are often used extensively. On the Web, however, there are no automatic map views<sup>8</sup>, and very few Web essays provide a complete map of their structure.



**Figure 8: The map in Mark Bernstein’s Hypertext Gardens**

Some Web essays do have visual cues to tell the reader how the page being read stands in relation to the essay, as in Mark Bernstein’s hypertextual essay “Chasing our Tails.” Here most pages display a simple map showing the four main sections of the essay, connected to form a cycle (see Figure 8). Each section consists of several pages. The section to which the page you are reading belongs is highlighted on the map; so a reader finding the map as shown in Figure 8 in a page would know that she or he was in the section called “Bones and dust.” Simple as it is, this map gives the reader some idea as to the scope of the essay, and also as to where she is and what other parts of the essay she might be interested in. It also reflects logical relationships between parts of Bernstein’s argument, though not as explicitly as Kolb suggests in the quotation above. The

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<sup>8</sup> There are automatic map generators, where you can download a program which maps a Web site that you specify. Apart from the fact that this takes a lot more effort than most readers are willing to spend, and requires more knowledge about the Web than many readers have, these map generators work poorly with hypertexts that don’t follow a perfectly hierarchical tree structure, where the top page leads to  $n$  second level pages, each of which leads to  $n$  third level pages, and so on. Mapping “E-Literacies” with a couple of these automatic mappers was not very helpful, although it did provide me with a complete list of pages.

cyclical layout of this map graphically demonstrates the codependence of the sections in this essay.

In “E-literacies”, which is the second hypertext I will read, there are no visual maps, but the reader can still find distinct sections, or regions, to use Kolb’s word, with clear structures that function in this way. “E-Literacies” demonstrates one way in which an a-hierarchical hypertext can have a very clear and effective structure.

second reading: **a hypertextual  
essay: Nancy  
Kaplan's "E-  
literacies"**

This reading of "E-Literacies: Politexts, Hypertexts, and Other Cultural Formations in the Late Age of Print" has three parts. In the first I map the structure of the essay, to see how the separate pages are connected together. In the second section I discuss the links, and classify the types of links I find in "E-Literacies"<sup>9</sup>. In the third section I define and discuss *ergodic dialogue*, a rhetorical strategy that occurs frequently in this essay.

### **Reading "E-Literacies"**

This early example of a Web-published, non-fiction, hypertext essay has electronic text as its theme. The author Nancy Kaplan invents the term "e-literacies", in which she combines the concepts of electronic literacy and of a literary elite (Kaplan 1997: E-literacies\_612.html). Using this term, Kaplan discusses various interpretations of electronic media as promising or threatening, and argues that these interpretations are in fact not directly derived from the technology at all:

[The academics referred to] claim to be elucidating the effects of technological arrangements, the impact electronic technologies will have on our culture. But in fact,

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<sup>9</sup> The essay "E-Literacies: Politexts, Hypertexts, and Other Cultural Formations in the Late Age of Print" developed from a talk at a conference to a hypertext which was published in the electronic (Web-based) journal *Computer-Mediated Communication* in 1995. I have looked most closely at the updated (1997) version of the essay which is published on Nancy Kaplan's own Web site.

all of them forecast cultural changes based on cultural ideals, and not simply on the “logics” of the systems they describe. (Kaplan 1998: Stakes\_247.html)

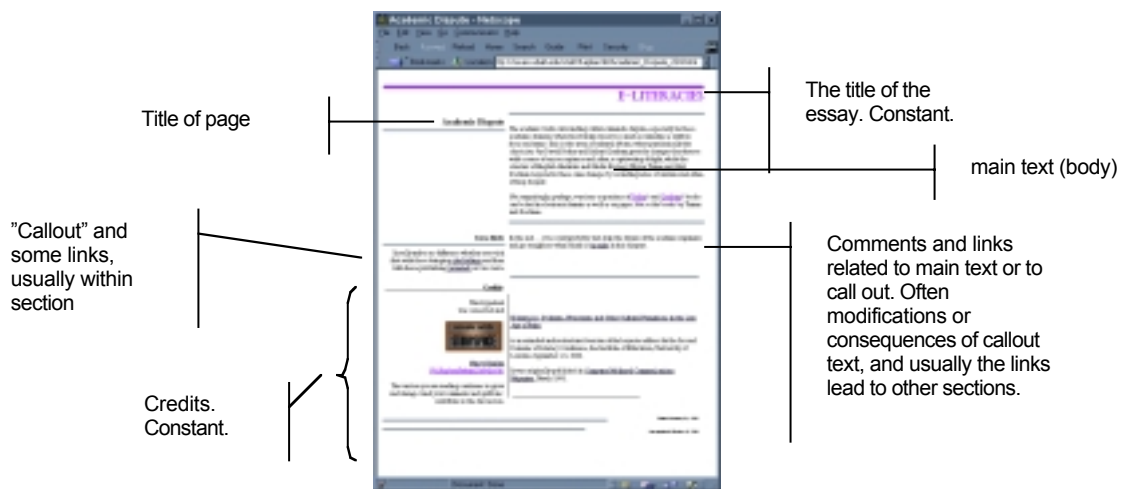
The essay consists of 35 pages, each page ranging in length from a paragraph to a number of lines corresponding to two or three printed pages. Although the essay’s structure is not explicitly described in the text or in a map or overview, I have identified three groups of pages clustered around the pages “Academic Dispute”, “Definitions” and “Tools”. In addition there are three independent pages which function both as bridges between these sections and as summaries of the argument.

### **Structure reflected in the page**

Essays published in a journal or a book usually have a standardised appearance, following the conventions of print. In contrast, in many Web essays, graphics and page layout are important signifying elements of the text as a whole – and by text I mean the composite of words, images and links. The layout of “E-Literacies” is not a very radical break with the traditional layout of an essay printed in a standard scholarly journal, but unlike most printed texts, the visual appearance of each page in this essay suggests the overall structure.

The diagram in Figure 9 shows the layout that is used throughout the essay. The use of colours is sparse, as is common of documents published in the early days of the Web. The only colour to be found here is in the purple of the title, in the automatically blue links, and in the small pink symbol that points you to a text excerpt (♦).

Each page is divided into two columns. The main body of text is in the right hand column, and the page's title and various comments or links are in the left hand column. At the bottom of each page are the credits. They state the full title of the essay, the home page and email addresses of the author Nancy Kaplan, that the essay was written with Storyspace, and they explain where the first version of the essay was published.



**Figure 9: The layout of a page in “E-Literacies.”**



**Figure 10: The same page as it was published in “ Computer-Mediated Communication Magazine in 1995.**

There is a horizontal line beneath the main text in the right hand column, and beneath this line are further comments. Usually, the left hand comments and links

continue the argument in the main text, while the right hand comments suggest alternatives, sometimes explicitly suggesting links to other sections. Although this separation isn't completely consistent, the layout indicates to the reader that the essay consists of several sections, and helps the reader to navigate within and between these sections.

In the original version of this essay, the layout is different.

Figure 10 shows the page as it is in the first version of the essay, which was published in the electronic journal *CMC* in 1995. The third paragraph in this version corresponds to the left hand comment in the later version shown Figure 9. The fourth paragraph in

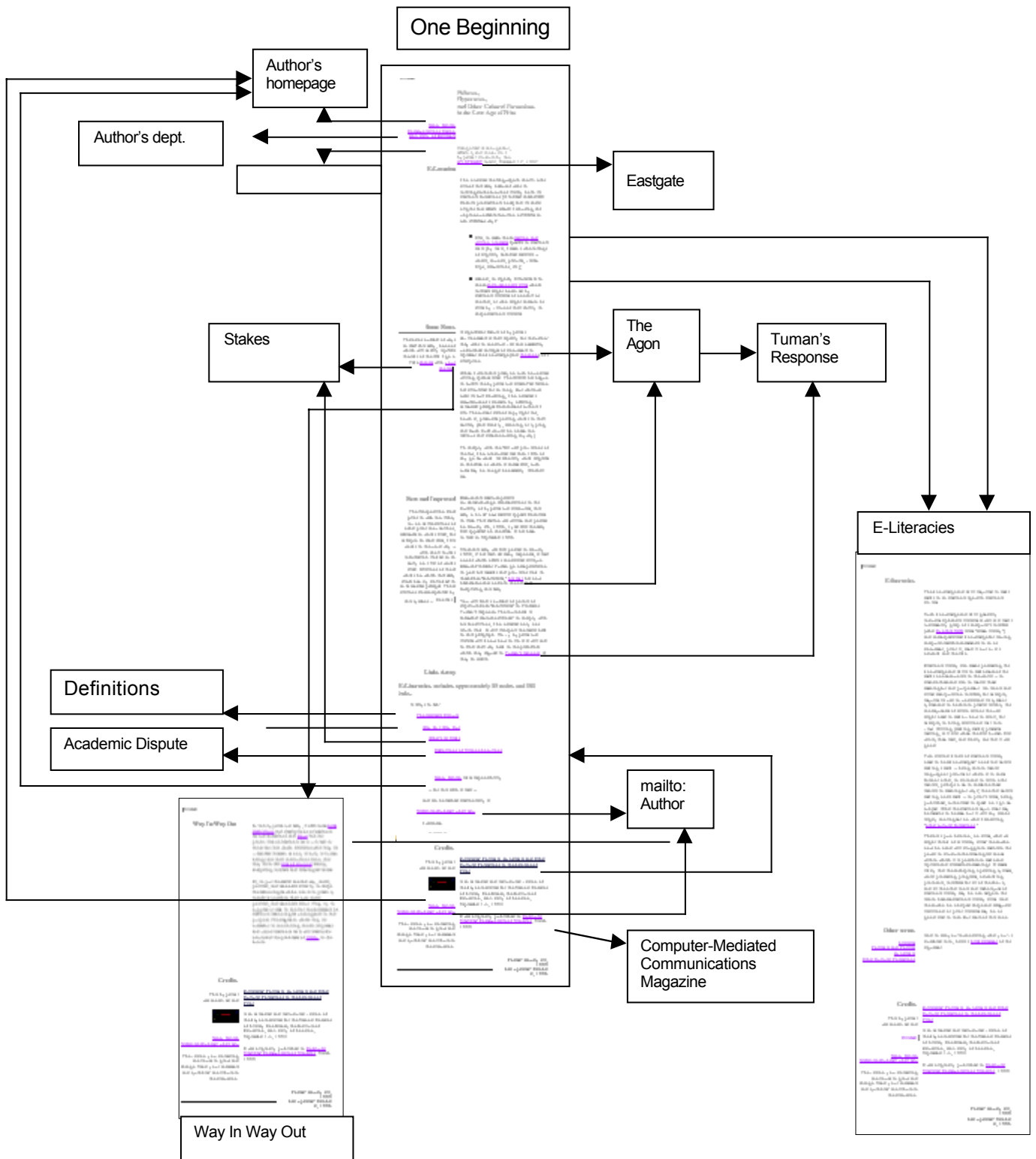
Figure 10 is identical to the text below the horizontal line in the right hand column in the later version shown in Figure 9. In the first version, these paragraphs were clearly meant to be read consecutively. The altered layout in the newer version of the essay makes the order the comments should be read in less certain. If read in the “wrong” order, the comments may confuse more than they enlighten or convince the reader.

I will discuss the overall structure and the three separate sections in “E-Literacies” later, but first let me show you how a reader might start to read the essay.

### **Starting to read: the first page**

The first page of “E-Literacies” launches the reader straight into the text itself. This page is lengthy (it prints as two and a half A4 pages) and covers many different

topics. Figure 11 shows a screen shot of the first page and the links leading from it. A couple of the links show a screen shot of the page to which the link leads.



**Figure 11: Links out from the first page**

As you can see, the first page has 23 links leading out from it. However, there is a lot of redundancy in these links. The 23 links only lead to 12 different pages, and



only 6 of these destination pages are internal to the essay; the rest lead to the author's home page, her university and to other external sites.

After the title, the page (and thus the essay) starts with an explanation of the word "e-literacies", stating that it is used in two different ways. This is elaborated in a two point bulleted list with one link out from each point. This suggests that the word has two different meanings and that the two links lead to two different destinations. Surprisingly, the two links both lead to the same page, a definition of the word "e-literacies" ("E-literacies\_612.html").

Beneath the definition of "e-literacies" the left column has the subtitle "Some notes" (which Kaplan labels a "callout" in the comments to her code). Underneath is the sentence "take chances with your choices" (the underlined words are link anchors). Both the placement away from the main body of the text and the personal, friendly wording draws attention to these links. I will discuss the links' direct address to the reader in detail later.

Back in the main, right hand column is a discussion of copyright and of "fair use" of excerpts from other texts which are used in the essay. Below this is a paragraph entitled "New and Improved" which notes changes to the essay since it was first published in January 1995. The main item here is the introduction to Myron Tuman's response to "E-Literacies", and there are two links from this section of the page to his response ("Tuman\_responds.html")

Under a horizontal line, the two columns merge into one. Here the title "Links Away" gives a list of four "A Ways to Go", that link to the three main sections of the essay and to "Way In / Way Out", a page which summarises the argument of the

essay and gives pointers to other parts of the essay. Below, there's a "non-disclaimer" (Nancy Kaplan takes responsibility – for this URL at least –), another horizontal rule and finally the "Credits" ( are in the normal two column layout) that state details about the essay.

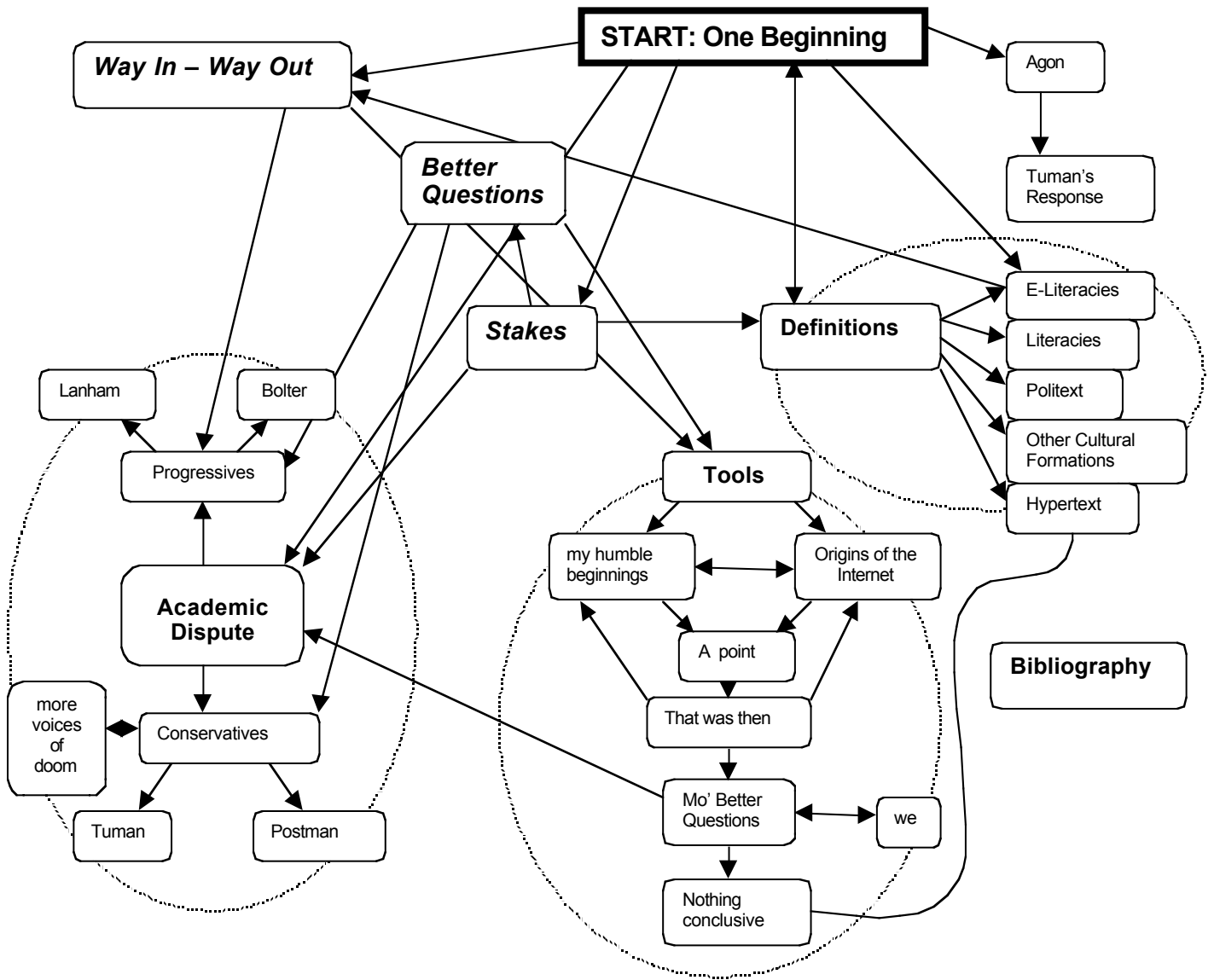
There is a lot of information on the first page. Almost four fifths of the text consist of comments to the essay's form and medium, a list of additions which have been made to it, a sort of table of contents (the "A Ways to Go") and the credits.

### **Overall structure**

Figure 12 is a map of "E-Literacies" as I read it. It is slightly simplified, but I have shown all the pages in the essay and most of the links. There are many links from individual pages to the bibliography that I have not drawn in, and there are many more links to the definitions than I have shown. There are also links from each page in the "Academic Disputes" section to "Stakes". I have drawn dotted circles around each of the three separate sections that I have found in the essay. The pages that function as bridges between sections are marked with titles in italics, and the main pages of each section have their titles in bold. The first page the reader sees, "START: One Beginning<sup>10</sup>" is marked by a thick box.

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<sup>10</sup> Although the title "One Beginning" suggests that there are several other possible beginnings, there are no other options, unless a link from outside the essay leads to a different page in the essay.



**Figure 12: A map of "E-Literacies."**

## Sections

As you can see from Figure 12, the three sections have clear structures, though each is different. "Definitions" is arranged according to a simple hierarchical tree structure, or a sieve as Bernstein calls it. (Bernstein 1998: 24) This sieve consists of a top level page with five pages branching out from it. Each of these five pages defines a central term, and contains links to "Way In-Way Out" (a bridge page that I

will discuss in detail on page 43) and to the other definitions. Other links in the text of this section lead only to the bibliography and to external sites.

As we saw in the previous chapter, “Structures of hypertext”, hierarchical structures like this are often well suited for conveying information, and the definitions function mostly as information that must be easily found. The other sections of the essay are much less objective, and have quite different structures, as I will show in the following.

The section that I have called “Tools” follows an almost linear sequence starting with the page titled “How tools came to be”. However, the one way track splits into two diverging paths that later join up and continue onwards: Kaplan describes her own first experiences with computers in one page and the beginnings of the Internet in another. There are many opportunities to visit both these two stories, as you can see from the map in Figure 12, but after reading them both the only unvisited links in each page lead onward to “A point”, from which the sequence is again linear.

The section’s drive forward is accentuated by the fact that all links from other pages in to the “Tools” section lead to the first page in the sequence, “How tools came to be”. There are no links out of the sequence (except to the bibliography) until you get to “Mo’ better questions”. The structural parallelism in the two stories Kaplan tells is increased by links between them pointing out their copresence in time (“Meanwhile, on the national scene ...” (My\_Humble\_Beginnings\_752.html)). The links onward, on the other hand, are sardonic and self-critical, and speak directly to the reader: “Nice story, you say? Here’s the point.”

(Origins\_of\_the\_Interne\_790.html) or “So what?” under the concise callout title “Point” (My\_Humble\_Beginnings\_752.html). Both these link descriptors lead to the same page, gathering the diverging threads together. Their apologies for the stories increase the linear motion onwards, towards “the point”.

The most obvious link out of “Tools” (the only link other than to the definitions and to the bibliography) leads to the section called “Academic Dispute”. This section states the arguments of the “conservatives” Myron Tuman and Neil Postman, who are sceptical to the changes electronic texts bring, and the “progressives” Jay David Bolter and Richard Lanham, who applaud them. The conflict between the views of these men is highlighted by their diametrical opposition in two distinct categories: progressives and conservatives. The symmetry of the arrangement adds to the effect.

Myron Tuman criticises this heightened structure of conflict in his response to the essay:

From this one fundamental disagreement [between Tuman and Kaplan] comes a host of others, most relating to the simplistic bracketing (in the style of TV-talk shows) of my position as ‘conservative’ and thus placing me to the right of the host along with Neil Postman and opposite two people who have greatly influenced my own work and with whom I think I share much: Jay Bolter and Richard Lanham. (With more time, I might speculate here how hypertextual linking may actually encourage the simplistic, oppositional thinking of TV-talk shows, foregoing the long-established practice of qualifying thought through intricate subordination, even WITHIN A SINGLE SENTENCE, by balancing via links people clearly representing distinct positions (an odd thinker with an even one, a square one with a round one). Kaplan certainly has such links, from the Stakes node discussed below, with “Postman and Tuman” linked to the ridiculously simplistic node, “Conservatives.”) (Kaplan 1998: Tuman\_responds.html)

Tuman fears that hypertextual linking forces writers to simplify the object or idea that they are trying to describe so that it will fit into clear dichotomies or into preordained categories. The example of Kaplan’s opposition of “conservatives” and “progressives” can certainly be taken as an example of this, especially if the

opposition is the only thing you see. However, looking more closely, we see touches of irony in the constructed dichotomy. The pun of the title “Academic Dispute” becomes clear once the reader has read “Stakes”, where Kaplan shows that the dispute is academic in more respects than in its being a debate between professors. Instead of debating whether the technology itself is good or bad, Kaplan argues, we should be examining how social and cultural organisation and ideals form the way we use the technology.

If I belabor the disputes among these men, it is because it is easy to overlook what is actually at issue. Interestingly, both pairs claim that their conclusions derive directly from the inherent technological properties of print and digital media. All four claim to be elucidating *the* effects of technological arrangements, *the* impact electronic technologies will have on our culture. But in fact, all of them forecast cultural changes based on cultural ideals, and not simply on the “logics” of the technologies they describe. (Kaplan 1998: Stakes\_247.html)

Within the section “Academic Dispute”, mocking side comments like “Lanham concurs. Tuman demurs. Postman decries.” (Kaplan 1998: Bolter\_519.html) serve to poke fun at the charade of a dispute or a talk show. And so we see that Kaplan builds up this simplifying dichotomy only to tear it down.

Linking in itself is no more simplifying than linear writing. Just as words, links can be used in many different ways.

## **Bridges**

As shown in the map (Figure 12) there are three pages that don’t belong in any of the essay’s three sections, but that forge connections between these sections. It is the links leading to and from these few pages that make my tidy map of “E-Literacies” look tangled. Two of these bridges, “Stakes” and “Way In – Way Out” are

among the four links in the partial table of contents on the first page (the list headed “A Ways to Go”).

“Way In – Way Out” is a particularly interesting example of a new rhetorical device which hypertext and the Web encourage. Printed articles and scholarly essays often start and finish with summaries or abstracts stating what the essay is about. Many hypertext essays adapt this convention to a new medium by using one page as both the beginning and the ending of a reading. “Way In – Way Out” is such an entrance and exit, both summarising the argument and suggesting paths to follow into the rest of the text:

In this hypertextual essay, I offer some brief definitions and descriptions of electronic textual formations and argue that the proclivities of electronic texts—at least to the extent that we can determine what they are – manifest themselves only as fully as human beings and their institutions allow, that they are in fact sites of struggle among competing interests and ideological forces.

Or, to put the matter another way, social, political, and economic elites try to shape the technologies we have so as to preserve, insofar as possible, their own social, political, and economic status. They try to suppress or seek to control those elements of electronic technologies uncongenial to that purpose. The degree to which they are successful in controlling the development and use of electronic texts will define the nature and the problems of literacy in the future. (Kaplan 1998: Way\_In-Way\_Out\_240.html)

Read as an entrance, this page gives the reader an idea of what the essay is trying to do, and provides some idea of the scope of the text. It guides the reader into certain parts of the essay. As an ending, the page lets the reader judge whether she has read enough of the essay for her purpose. It also reminds her of the main argument of the essay, and it lets her check whether she has indeed followed the paths that interested her in the first place.

The important place that “Way In – Way Out” has in the essay is reflected in the links pointing to it: they are not many, but they are from pages the reader is almost

certain to visit, both early in a reading and later on. Although the link in the table of contents at the bottom of the first page may not be the first link a reader notices, there are also links to the page from each of the five definition pages in the “Definitions” section. The links stand out from the rest of the text both due to their positioning, under the main text in the right hand column, and due to their colloquial wording and direct address:

And in case you’re wondering what you’ve stumbled into, here’s a brief statement of the argument. (Kaplan 1998: E-literacies\_612.html)

If the reader doesn’t choose the link straight from the first page to “Way In – Way Out”, perhaps attracted by the promising title of the page, she is still likely to reach this page early on in her reading of the essay. For instance, if the reader chooses one of the first two links in the main text of the first page, she will come to the definition of “e-literacies”, and find the text quoted above. Each time she encounters another definition page, the same sentence will appear.

It is not equally likely that a reader will finish reading the essay with this page. There are no links to it other than the ones I have mentioned from the first page and the definitions. However, readers may read cyclically, re-reading the first page (which is accessible through a link in the credits of each page), and deliberately seeking “Way In – Way Out”.

The fact that readers may encounter this page many times in the course of reading “E-Literacies” makes it different from the introductory abstract or a final summary in a conventional essay. A section of text which is read more than once gains importance for the reader. Having such a stable element that is easy to return to



while reading a hypertext not only clarifies what can be read, but increases the reader's power to decide for herself or himself what he or she would like to read.

Of the two other pages which bridge the essay's sections, "Stakes" is the most important. It only has two links leading to it, but the links out make it a crossroad, with paths leading to each section of the essay. It links to the first pages of each of the three main sections in the essay, in addition to the third bridge, "Better Questions". This page contains the crux of the argument, but it is longer, more specific and more detailed than "Way In – Way Out".

"Better Questions" also serves as a form of crossroads, suggesting links to the "progressives" or "conservatives" and also to the "Tools" section, and explaining how these pages fit into the argument:

To understand more clearly what is at stake in the dispute between those who see largely beneficial effects devolving from new technologies and those who see largely deleterious effects resulting from those same technologies, we need to examine the technologies closely but we also need to ask how and why these technologies have become available, who is attempting to shape their forms and effects, and to what ends. (Kaplan 1998: Better\_Questions\_243.html)

## Links

Although "E-Literacies" has no explicit map, the reader is made aware of the function of individual pages, of their place in the essay as a whole and of the existence of the three sections. All this is read from the page layout, from comments in the text, from the link descriptors and from the reader's own experience reading this and other texts, hypertextual and conventional.

"E-Literacies" implicit structuring is similar to the flow of argument in a traditional essay, where relationships between the elements in the text don't have to be

explicitly labelled in order to be understood. Un-labelled links needn't be random or meaningless.

In the following pages, I will examine these implicit relationships that links forge between pages. I will show how the links in "E-Literacies" are more than random associations. But to see these relationships, we need to look at more than the line drawn between two boxes.

### **Link typologies**

Several attempts have been made at devising link typologies, or ways of describing different sorts of links. In html (HyperText Mark-up Language), which is used to code Web pages, there is only one kind of link. But some hypertext systems use *typed links*, which signal to the reader what the relationship between the link's anchor (or departure point) and target are. Randy Trigg's "A Taxonomy of Link Types" gives very detailed overviews of possible types of links, suggesting types such as refutation, support, source, generalisation, specification, example, alternate view, correction, analogy and so on (Trigg 1983).

As discussed in the literature about hypertext, typed links are usually intended to be explicitly labelled so the reader can choose which link he or she wishes to follow according to the type of information she or he is interested in. (see among many others Trigg 1983, DeRose 1991, Kolb 1997) Typed links may improve the external navigation aids, making it easier for users to find specific information. In hypertextual annotated editions, typed links could be useful to show the difference between various kinds of comments. But for texts that are not primarily

informational, typed links may obstruct or distract from the immersed, careful reading that we want.

In my study of link relationships in the following pages, I do not intend to set up a complete list of link types, nor do I wish to suggest that these link types are absolute. Instead, I am attempting to develop ways of describing implicit link relationships.

Before moving on, though, I should point out that there is one explicit typed link in “E-Literacies:” the little pink symbol (✿) which appears now and then and which leads to lengthy excerpts from other works. Although html doesn’t implement typed links<sup>11</sup>, they can be constructed individually, as has been done here. Icons are used more and more on the Web to signal links leading “home” (to the home or main page of the site) or back to the previous page, or to otherwise advertised destinations. When used consistently, these icons function as typed links, as in the icon bar in the “Break of Day” tutorial.

Most links are still in-text links<sup>12</sup>, both on the Web in general and in “E-Literacies” in particular. In-text links show no predefined relationship between the nodes which are linked together. This means that the nature of the relationship between pages is not predefined, and must be interpreted by the reader in each case. And readers do interpret. When you click on a particular link descriptor, you probably have some idea of why you have chosen that particular link, and accordingly, some idea of

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<sup>11</sup> An exception is the colour difference between visited and unvisited links that is shown in most Web browsers. These are in effect typed links.

<sup>12</sup> By in-text links I mean links where the link descriptor is a word or phrase in the main text, and not separated out in a table of contents, a callout, an icon or otherwise.

what you expect to be presented with next. As readers grow more familiar with hypertext, their expectations and interpretations build conventions.

There are many conventions for interpretation. In any text, whether printed or electronic, we have learnt to assume that a short sentence or phrase at the top of the page in a font type or size different from the rest of the text is the title of the text. A name placed beneath the title is assumed to be the name of the text's author. In a Web document, a name placed like this will very often be coloured blue and underlined, signalling a link. Readers familiar with Web conventions will assume that this link leads to more information about the author, probably to her or his home page or possibly to a biography of the person. Correspondingly, links leading from proper names – of people or departments or companies or products – are assumed to lead to the home page of the object named. This is close to a one to one relationship, for the name leads to the item named – or as close as you can get in cyberspace. In fact the link is metonymic, leading to the named object's presence on the Web, not to the object itself.

Links from proper names and perhaps nouns in general are conventionally interpreted to mean “follow this link to see more information about X” (where X is the link's anchor descriptor). But there are exceptions. How can we describe the various ways links can function? And what if the link descriptor is not a noun? These exceptions are probably more common in literary Web texts than in those which are primarily meant to provide information or advertising.

## Links in the thesaurus

“If links could talk, writes Francisco Ricardo, “what would they say about their texts?” He continues:

One embryonic way to explore this question is to treat links separately from the lexias they interconnect, and expand their descriptive power to the point where, by themselves, they become a reading. (Ricardo 1998: 146)

Ricardo proposes extracting link descriptors (i.e. the word or words in a page which are linked to another page, the departure point of a link) from the rest of the hypertext, and sorting them by the conceptual categories used in a thesaurus like Roget's. These categories are ordered and given numbers according to the level of abstraction of the concepts, so finding to which category link descriptors belong gives an idea of how abstract the links in the text are. It would be especially interesting if link descriptors in a text converged around certain concepts, perhaps suggesting other meanings than the complete text of the nodes.

Interesting as this may turn out to be, it is limiting the study of links to the study of link descriptors. A link is more than a word. If we are to study links as a separate part of the hypertext, we should attempt to interpret the relationship between pages, or between a descriptor and a page, which the link calls into being.

## The rhetorical approach

Nicholas C. Burbules describes the relationships between pages rather than the link descriptor alone. Burbules argues that “links *create* significations” and should be understood as rhetorical moves, not read uncritically as “the neutral medium of passing from point A to point B. (Burbules 1998: 110) Links influence our interpretation of the pages they connect:

(..) links change the way in which material is read and understood: partly due to the mere juxtaposition of the two related texts (how will a jump from a page on teenage drug-use statistics to a page on rock music affect how the music page is read?; and partly by the implied connection that a link expresses. (..) Moreover, links do not only express semic relations but also, significantly, establish pathways of possible movement within the Web space; they suggest relations, but also control access to information (if there is no link from A to B, for many users the existence of B may never be known – in one sense, the link creates B as possibility). (105)

Burbules wants to understand how links function in order to aid people to read hypertext critically. To do this, he examines how rhetorical tropes and figures can be used to describe the way links associate texts. He sees tropes such as the metaphor, metonym, antistasis and catachresis as describing forms of links, and also suggests some new tropes for links. Tropes combine meanings from different spheres by using words to mean something other than their usual meaning. Similarly, links connect two pages with two different texts. This association gives an additional meaning, not always to be found in each separate page – much as a metaphor's combination of meanings means something other than each meaning taken separately.

### **Links in E-Literacies**

To see how these two perspectives on links shed light on Nancy Kaplan's essay, I have studied the links in the essay to see how they work. In my attempt to understand the between of links, I have focused on the nature of the relationship that the link forges between two texts, that is between the link's anchor: a word or phrase in one page and the page that is the link's target. Using Burbules' idea of categorising links according to rhetorical figures, I have divided the link relationships in "E-Literacies" into four types, where the relationship between the

anchor and target is either literal, figurative, based on chronology or dialogue. I will discuss each type of link in the following sections.

### **Literal links**

In a literal link, the target of the link is either the Web presence of the object or concept named in the anchor text, or a definition or elaboration of it. There are several kinds of literal links. The first sort we see in “E-Literacies” are the links leading from a **proper name** to the Web presence of the person or thing named. These links usually lead to pages external to the essay, such as the author’s home page or to the electronic journal in which the essay was first published.

As I mentioned above, the literal link from the descriptor “Nancy Kaplan” leads to Nancy Kaplan’s home page. In a sense, this type of link relationship is not purely literal, but also has a **metonymic** aspect to it. The link does not actually lead to Nancy Kaplan’s person, but the target is about as close to the real thing as possible on the Web: the home page is the Web presence of the person or organisation<sup>13</sup>.

The links to *Hystruct* or to the *Computer Mediated Communication Magazine* are more purely literal than the link from the descriptor “Nancy Kaplan”, since these are things that only exist on the Web. These links come as close to a one-to-one relationship as is possible in this medium.

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<sup>13</sup> Even closer net presences can be imagined, such as a link to a real time discussion group or a MUD or MOO where you could have a real time, though written, discussion with Nancy Kaplan; or a link to a Web camera showing constantly updated photos of Kaplan’s front door so you would have the chance of seeing her image.

Similar to these are **table of contents** links, which lead to a named section of the essay itself. These links can either be separated from the rest of the text, so they resemble a printed table of contents (as we see close to the bottom of the first page of “E-Literacies”) or they can be explicitly mentioned in the text as references. On the first page, the links to Tuman’s response to the essay function as table of contents links. The words “to Tuman’s response” make it clear that Tuman’s response is a separate section of the essay. Another example of this kind of link can be seen in the page titled “How Tools came to Be”:

Given my admittedly brief and incomplete account of the types of texts supported in an electronic world in the section of this essay called “Definitions,” what can we conclude (..) (Kaplan 1997: How\_Tools\_Came\_to\_Be\_907.html)

Here the link descriptor (and the rest of the sentence) indicates that the main argument on the page is based on a section of the essay called “Definitions” that the reader may read if desired.

Table of contents links often function similarly to **elaborations**, which offer additional information about the concept or thing named by the link descriptor. For instance, the descriptor “hardly alone” in the sentence “these two are hardly alone in their fears.” (Conservatives\_163.html) leads to the page titled “More Voices of Doom”, which elaborates upon the descriptor by discussing other people who are sceptical to electronic media. Another example can be found in the page titled “A Point”: “One point of my stories about the Internet and my humble beginnings is that (..)” (Kaplan 1997: A\_Point\_835.html). These links lead to pages where the stories are told.



The fourth type of literal link which I have found in “E-Literacies” is the **definition**.

This is similar to the elaboration, except that it defines a word or concept instead of exploring it and opening it out by elaborating upon it. A fifth type might be **bibliographical** links, which simply lead to a bibliographical reference.

As you can see, definitions, elaborations and table of contents links have many similarities. In “E-literacies” these are for the most part internal links, which lead to other pages in the essay rather than to external pages. All of these links have the effect of allowing the reader to go from a summary to the details.

### **Figurative links**

Figurative links occur when a link descriptor does not lead to the thing named, or to a definition or elaboration of this thing. I propose that this is equivalent to the way figurative language is used in conventional writing:

Figurative language is a departure from what users of the language apprehend as the standard meaning of words, or else the standard order of words, in order to achieve some special meaning or effect. (Abrams 1993:66)

Burbules describes links that function as **metaphors** in his essay, but there aren't many of these in “E-Literacies”. Those I have found are all metaphors for sections of or functions in the essay. Link descriptors such as “sites of struggle”, “what is at stake” and “the agon” all connect certain parts of the essay (which are the targets of the links) with ideas of dramatic conflict.

The **antistasis**, also known as the *diaphora*<sup>14</sup>, is one of the figures Burbules pinpoints in his essay. This is a figure where a word is repeated in a new context, where it gains a new meaning. An example is Benjamin Franklin's famous remark that "We must all hang together or most assuredly we shall all hang separately." (Dupriez 1991:133) Burbules writes that "Many Web links work this way: using a particular word or phrase as a pivot from one context to a very different one," (Burbules 1998: 113)

There is a antistasic link from the first page of "E-Literacies": from the note in the left hand column: "Take chances with your choices." The link is not a true antistasis, since the target is a page titled "Stakes", and the word "chances" is not used again. The relationship here goes by way of an approximate synonym: the concept of taking chances is closely related to the concept of staking or gambling on the outcome of something. The page to which this link leads discusses what is at stake, what the issue is – so the meaning has slipped from the meaning "chances" had in the descriptor. Although this is not a true antistasis, the relationship between the descriptor and the target of the link has the same function.

There are without doubt many other possible types of figurative link, some of which Burbules suggests in his article, but I have not found them in "E-Literacies".

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<sup>14</sup> Most of the rhetorical lexicons I have checked do not include the term antistasis. Where mentioned, it is defined as a subcategory of the *diaphora*, which is itself a subcategory of the *distinction*. (Eide 1990:19) Other detailed descriptions of the diaphora don't mention the antistasis, but make the diaphora sound synonymous to Burbules' description of the antistasis. (Dupriez 1991:133) However, Richard Lanham's *Handlist of Rhetorical Terms*, which is the source Burbules has used, defines the antistasis as the "repetition of a word in a different or contrary sense." (Lanham 1991: 16)

Probably figurative links are more common in fiction and poetic hypertext than in non-fiction.

### **Chronology links**

In the “Tools” section of the essay there are two narratives: the story of Nancy Kaplan’s first meeting with computers, and her story of how the Internet came to be. These two stories are set in the same period of time, and their simultaneity is highlighted by the structure of the section, as I have discussed above (see page 38). These narratives are repeatedly set in time by the link descriptors which lead to the pages. The link descriptors sound like captions in silent movies:<sup>15</sup>

“Meanwhile, on the national scene, some forward-thinking folk in the Defence Department and the National Science Foundation cooked up the beginnings of the Internet.” (Kaplan 1997: My\_Humble\_Beginnings\_752.html)

Had the second part of the sentence been the link anchor, the link would have been an elaboration. Instead, using the word “meanwhile” as the departure point highlights the chronology of the events, making their simultaneity stand out. Link descriptors do stand out on the Web, doubly highlighted as they are: screaming out their importance in translucent, underlined blue. It is more than the link itself which makes the link descriptors important in Web rhetoric.

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<sup>15</sup> Words like this also function as links between different levels of time in films and novels. The difference here is that the word that opens an analepse or prolepse (or else a move to a narration of something that occurs at the same time as the first event) is in a sense in two textual levels at the same time. It is a word in a sentence in a sequential text (which we could think of as the page’s x-axis) and at the same time it is an entrance to a text which is heading in a different direction (the y-axis). In a linear narrative, the word “meanwhile” is a simple move from one time to another. Here it is both times at once.

Chronology is given primacy in the other pages in this section as well, as in “That was then...”, which starts “What I did not know in 1968, when I started using computing in the service of communications some other people started to fund an infant Internet, (..)” These link descriptors stress the chronology of the events narrated. This is a very clear and understandable way of storytelling.

### **Dialogic links**

The link descriptor “your chances” (Kaplan 1997: One\_beginning\_447.html) addresses the reader directly. Direct address like this, to the reader or to another entity, is known as an **apostrophe**. This rhetorical figure describes the link descriptor, but not the link itself. By following the link, the reader “answers” the apostrophe, and is constituted as a participant in a dialogue. I will thus call the relationship which the link creates between these two pages *dialogic*. This is a rhetorical device which is frequently used in hypertext, and which I will discuss in depth in the following section.

### **The ergodic dialogue**

When I argue that the dialogue is a privileged rhetorical figure in hypertext, I am not talking about a true dialogue between the author and the reader, or about so-called interactivity or the hypertextually “empowered” reader’s co-authorship. I am talking about a kind of dialogue that is a rhetorical figure only possible in *ergodic* texts.

Ergodic dialogue has not been discussed in previous literature on hypertext or on other ergodic texts. In order to explain this figure, the next pages will be devoted to

a theoretical discussion, after which I will give examples of how ergodic dialogue is used in “E-Literacies”.

Espen Aarseth uses the term ergodic (from the Greek *ergon* and *hodos*, meaning “work” and “path”) to describe texts where “nontrivial effort is required to allow the reader to traverse the text.” (Aarseth 1997:1) This means that the reader of ergodic texts has to do more than move her eyes and turn pages. While the reader of a non-ergodic text has the “safe, but impotent” pleasure of a voyeur, the reader of a cybertext has “the player’s pleasure of influence: ‘Let’s see what happens when I do *this*’” (Aarseth 1997: 4). Ergodic texts are not limited to electronic media, but exist in both printed and electronic media.

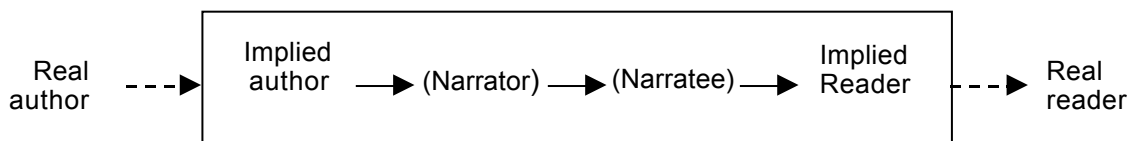
In classical rhetoric, direct address to the reader is a well known device. The rhetorical question (also called *interrogatio*, or in Greek *erótēma*) is a question directed to the reader or the audience without expectation of any answer. The *apostrophe* is the “breaking off the discourse to address some person or personified thing either present or absent” (Lanham 1991: 20). Both these figures are rhetorical in the sense that the person or thing addressed is not expected to answer the address. In hypertext, however, the reader’s response is a part of the text. I will explain this further below.

Let me first explore the more general effects of directly addressing the reader. Apostrophising the reader is familiar to readers of eighteenth and nineteenth century novels,<sup>16</sup> and is well illustrated by the famed sentence from *Jane Eyre*: “Reader, I married him.” (Brontë 1847: 516) The sentence “Take chances with your

choices” from the first page of “E-Literacies” also apostrophises the reader. In contrast to the reader of *Jane Eyre*, the reader of “E-Literacies” may answer the address by choosing to follow a link from it. This is an example of ergodic dialogue.

I wrote that the sentence “Take chances with your choices” is an apostrophe to the reader. Before assuming that it is the reader who is being addressed, we must think through who the “you” in this sentence is. Who is really participating in the ergodic dialogue?

Addressing the reader as is done in the sentence I cited explicitly writes a narratee into the text. The narratologist Seymour Chatman maps the narrative communication situation as follows:



**Figure 13: The narrative communication situation (Chatman 1978: 151)**

Outside the box are the elements that are outside of the text itself, namely the real author (in our case the real life Nancy Kaplan) and the real reader (you, I or whoever is actually reading the essay). The next element in the model is the implied author, who is not a person or a character, but the implied set of principles organising the novel, or in other words the reader’s reconstruction of the designer of the text. The narrator is the text’s “I”, the voice speaking or writing, and the narratee is the character whom the narrator is telling the story to. The narrator and narratee are not necessary in narrative communication, as Chatman indicates by

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<sup>16</sup> Of course, the apostrophe has also been used in many other texts.

the brackets around these elements in the figure. The implied reader, the final element in the model, is the counterpart of the implied author, it is the reader presupposed by the narrative. According to Chatman, the implied author and the implied reader are the only elements that are immanent to a narrative (Chatman 1978: 150).

The essay is a borderline genre. It is usually classified as non-fiction, but often has a personal, “literary” style. Essays very often have an explicit narrator, an “I” who can be very present in the text. Because essays are generally assumed to be non-fiction, and because they usually reflect, argue or portray instead of telling a story, this “I” is commonly equated with the real author. Theoretically, however, the positions must be held apart.

Using Chatman’s model of narrative communication as a tool to read “E-Literacies”, one of the first things to notice is that the narrator is present from the very first sentence of the essay’s first page:

I have twisted the language to contrive the title of this essay because I want to interrogate the future of literacy, both its electronic formations (if indeed these differ from its pre-electronic ones) and its social origins and effects. (Kaplan 1997: One\_Beginning\_417.html)

The primacy of the “I” is held throughout the essay. The language is for the most part direct and personal, and the frequent use of irony adds to the impression that we are reading a subjective account. The story of “my” first meeting with computers is offered as a parallel to the official history of how the Internet began. This narrator constructs a personal view of the world, twisting language when the old words won’t do and describing familiar dichotomies only to show us their falsity.

Ergodic dialogue is initiated when the narrator in an ergodic text addresses the narratee, and the narratee is cast as “you”, thus merging with the implied reader. Thus far it is the same as a conventional apostrophe. However, in the case of an ergodic dialogue, the real reader can answer the narrator’s address, and enter into a role offered by the text. This is similar to the way Chatman describes the reader identifying with the implied reader, and possibly with the narrator:

When I enter the fictional contract I add another self: I become an implied reader. And just as the narrator may or may not ally himself with the implied author, the implied reader furnished by the real reader may or may not ally himself with a narratee. (Chatman 1978: 150)

Chatman gives the example of Hemingway’s “The Killers”, where the implied reader is not on the side of the Mob: “[the story] does not permit us to assume that we too are members of the Mob; the story just will not work if we do.” (Chatman 1978: 150) In stories that have an explicit narratee, the narratee and the implied reader need not be closely allied. In *Les Liaisons Dangereuses*, for instance, the narratees (and narrators) of most letters are much more cynical than the implied reader, who sees through the narrators’ and narratees’ cruelty (Chatman 1978:150). So though the reader must engage in the role of implied reader that is offered by the text, this role need not coincide with that of the narratee.

The strong presence of the narrator has its counterpart in the presence of the narratee, the character whom the narrator is addressing. When the narratee is cast as “you”, the difference between the real reader and the “you” of the text (the narratee) is obscured. This is especially true in hypertext and other ergodic texts, where the real reader does respond to the narrator’s address in some way.



However it is important to realise that the narrator's apostrophising of the reader is still rhetorical, and so is the reader's response to the address.

The apostrophe in the sentence "Take chances with your choices" constructs a role of narratee for the reader to enter into. Accepting that role, the reader's real choices for responding are very limited. Although the reader becomes a part of a dialogue, it is a rhetorical dialogue which is not controlled by the reader. The reader merely acts out a part, following a script provided in the text.

Therefore, engaging in ergodic dialogue does not give the reader what Janet

Murray calls *agency*:

Agency is the satisfying power to take meaningful action and see the results of our decisions and choices (Murray 1997: 126) But activity alone is not agency. For instance, in a tabletop game of chance, players may be kept very busy spinning dials, moving game pieces, and exchanging money, but they may not have any real agency. The players' actions have effect, but the actions are not chosen and the effects are not related to the players' intentions. (Murray 1997: 128)

When we play our part in an ergodic dialogue, we are performing a ritual, much as we do when completing a complicated task in a word processor by following steps explained in the manual: "we are like participants in a square dance, repeating formulaic sequences, with the relevant manual page [for the word processor] acting as the caller of the dance" (Murray 1997: 128). Murray calls this formulaic performance of a fixed repertoire *participatory*, but stresses that the human participant has no agency. This corresponds to my assessment of the ergodic dialogue as a rhetorical figure, where the reader simply follows a script instead of engaging in a real dialogue.

Let me attempt to define ergodic dialogue based on the points I have discussed in the last pages: Ergodic dialogue occurs when the reader answers a direct

address, usually an apostrophe or an interrogatio, from the narrator by engaging in the role of narratee and following a script, choosing between a limited number of options available to her in this dialogue. Ergodic dialogue is only possible in ergodic texts, where the reader can respond to the address and thereby influence her or his path through the text, though only according to the options set in the text.

### **Occurrences of ergodic dialogue in “E-Literacies”**

Based on the examples I have found in “E-Literacies,” ergodic dialogue is used for three main purposes. First, as a means of guiding the reader through the essay or to orient the reader. Second, to request a response, either real (the reader sends feedback directly to the author via e-mail) or pretended (as in the initial “Do you want to hear about it?” in Joyce’s *afternoon, a story*.) The third purpose is perhaps the main goal of this rhetorical device, and it is to make the reader feel that she is a participant in the argument and included as an equal in a dialogue with the author. Although the reader’s participation is totally controlled by the author, and the reader is actually only playing the part of narratee, a consistent use of ergodic dialogue is likely to make him or her feel an active participant.

There are many examples of the first use of ergodic dialogue, to guide the reader, in “E-Literacies”:

And in case you’re wondering what you’ve stumbled into, here’s a [brief statement](#) of the argument. (E-literacies\_612.html)

Or, you could skip this part of the essay and proceed directly to my account of how [tools](#) came to be. (Definitions\_798.html)

In the end . . . you could probably just skip the details of the academic argument and go straight to what I think is at [stake](#) in this dispute. (Academic\_Dispute\_224.html)

See [Lanham](#) or [Bolter](#) for a different sense of these currents. (Tuman\_411.html)

In the last of these examples, there is no explicit apostrophising of “you”. The use of the second person imperative in the verb “see” signals that the sentence is addressed to a “you”, yet the sense of a personal and friendly dialogue is lost. This guidance is no different from an impersonal reference to another chapter in a conventional scholarly article. Not all guidance need be formed as a dialogue.

In “E-Literacies” the reader is only ever apostrophised as an entrance to an ergodic dialogue. The direct address always invites the reader to click a word and choose a link<sup>17</sup>.

Some places, the narrator speaks as if the narratee has already started the dialogue, putting words into the narratee’s mouth:

Nice story, you say? Here’s [the point](#) (Origins\_of\_the\_Interne\_790.html)

That was [then](#), you say? (A\_Point\_835.html)

OK, so these guys just generally don’t see things the same way. What’s at [stake](#) in this dispute, anyway? (Bolter\_519.html)

Or the narrator puts words into the narratee’s mouth without explicitly explaining who said them:

[So what?](#) (My\_Humble\_Beginnings\_752.html)

This suggests an on-going dialogue, not limited to the individual apostrophes of the reader. These comments not only guide the reader to new pages, but also function as friendly apologies, phrased in a very personal and informal way: much as in a real dialogue. This adds to the feeling of personal involvement.

A similar use of dialogue is to apologise for and suggest a way back out of a digression. Two of the pages in “E-Literacies” are digressions from the main structure of the section. There is only one link to each of these pages, and the only link away leads right back again. Both of these links back are embedded in comments remarking that this is a detour, as in “We\_447.html”: “But I digress,” where “digress” is a link back to the page the reader came from. Although the reader is not explicitly addressed here, the words function as a line in a dialogue due to the apology lying in them. The same sentence may appear in a conventional article. But in this ergodic text, the reader is required to take part in the dialogue, to confirm the narrator’s statement by clicking the word before the essay can continue.

A second purpose of ergodic dialogue is to request responses from the narratee or in some cases, from the real reader, as here:

The version you are reading continues to grow and change. Send your comments and quibbles: contribute to the discussion.” (One\_Beginning\_417.html)

When the narrator asks the narratee to send comments by email, the ergodic dialogue may become real. If the reader merely reads this request without acting upon it, the address remains rhetorical, merely signalling an open-mindedness and a willingness to hear the reader’s opinion. It thus serves the same ultimate function as the purely ergodic dialogue. However, if the reader enters into this

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<sup>17</sup> However, the personal pronoun “you” can be used without its functioning as an apostrophe when it is used in place of the more general “one”, as in the page telling the story of Kaplan’s first experience with computers: “Typographic errors were, needless to say, costly. You cannot backspace to delete a hole you have just punched into a card.” (My\_Humble\_Beginnings\_752.html)

dialogue and actually sends the author an email, the dialogue becomes real. The narrator merges with the real author and the narratee with the real reader.

Tuman's response to the essay is an example of this real dialogue. Or it was an example, when it was sent to Nancy Kaplan as a private email. Included in the text as Tuman's text is now, it serves the same rhetorical purpose of signalling openness and appreciation of difference in opinions.

The third use of the ergodic dialogue (to make the reader feel actively included) is particularly evident in "E-literacies" when the "you" is replaced by a "we". This use of the inclusive "we" belongs to the congenial form used in scholarly articles ("let us discuss...", "we shall explore...") but here it is also used rhetorically to inspire action in the real reader. By including herself in the plural "we", and by defining the members of that we, as she does in "We\_447.html", Kaplan enlarges the rhetorical dialogue between narrator and narratee. The two participants (interlocutors) in the play of dialogue are on the same side in a greater game, which is taking place in the real world, not just in the text. Perhaps the dialogue has made it more natural for the reader to identify with this "we" and thereby side with Kaplan. If so, the ergodic dialogue, constantly forcing the reader to agree by clicking links, can be a potent rhetorical strategy for persuasion. Here are some examples of how "we" is used:

What we need to be thinking about and doing ... (Mo\_Better\_Questions\_747.html)

What prevents electronic textuality, its politexts and its hypertexts, from fulfilling its promise—or making good on its threat—we might reasonably conclude, is us. We, the elite keepers of high print culture, wittingly or unwittingly the allies of Postman and Tuman, earn our livings by the printed word. (Mo\_Better\_Questions\_747.html)

So here is my challenge to English departments, education departments, and teachers everywhere. Learn this space. Contribute. Write this world. (Nothing\_Conclusive\_785.html)

The same effect is seen in the comments Kaplan has added to the excerpts from other writers' books. Although Kaplan writes that "I attempt to allow Tuman to speak for himself, to represent his own views in his own way" in these "extensive excerpts" (mtcontexts\_454.html) she has inserted sarcastic comments into the excerpts from Tuman's and Postman's books. (The "progressives" excerpts remain uncommented, clearly revealing Kaplan's own sympathies.) These comments contain no links, and are not ergodic since they do not require any action other than reading from the reader. Instead, this is a dialogue between Kaplan (or the narrator) and Tuman (or Tuman's text). This is a common rhetorical technique of poking holes in someone else's argumentation, not so different from Plato's dialogues themselves. Look at this comment for instance, which is marked as separate from the excerpt from Tuman's book by a horizontal line above and below it:

I just can't resist popping in here: if the statistic Tuman cites is undocumented (fabricated? a guess?) then it is not a statistic and cannot be either relevant or troubling. If this is the sort of critical thinking that comes from print literacy's preference for deep study in solitude, I'd say we were due for a change!

But perhaps we should get back to the regularly scheduled, authorized voice here, eh?  
(Kaplan 1997:mtcontexts\_454.html)

In itself this is little different from a standard rhetorical question or interrogatio. But taken together with the extensive use of ergodic dialogue in "E-literacies", this is part of the basic dialogic effect that is evident in the essay. The colloquial wording of this comment and the use of "we" facilitate the reader's identification with the narrator.

The colloquial tone of the narrator's remarks in these dialogues not only serves to increase the reader's identification with the narrator, but also increases the

distance to the other party in the dialogue in a way which would be less clear if Kaplan had chosen a more polite or formal tone, as her opponents use. The same tactic can be seen in the following example. The first line is part of the excerpt from Neil Postman's book, while the second is the narrator's comment:

There are, for example, no "great computerers," as there are great writers, painters, or musicians.

I can't resist interjecting here: there are no great "pencilers" or "brushers" either. What is this guy thinking? (Kaplan 1997: npcontexts\_119.html)

"What is this guy thinking?" The narrator's incredulity that Postman could say something as illogical as she finds this statement to be distances her opponent, as does the formal academic writing in the excerpt in contrast to the narrator's informal, sarcastic joviality.

### **Conclusion about ergodic dialogue**

Based on the examples in "E-Literacies", it seems that for an ergodic dialogue to occur, three factors must be in place. First, a personal tone, similar to that we are familiar with from real dialogues. Second, a direct address to the reader, or more precisely to the narratee, who is set as "you." The third necessary factor is the opportunity to respond instantly, as we do by clicking a word in "E-Literacies". This instant response is like an acceptance of a role, and is not possible in non-ergodic texts.

Ergodic dialogue can also occur in non-electronic texts, although the texts must be ergodic. Choose-your-own-adventure books have the same sort of dialogue, and so can moveable picture books and pop-up books. The children's' book *Elmo's Lift-and-Look book* (Ross 1994) uses ergodic dialogue, asking the young reader

(or rather the young listener) “Can you help Elmo find his teddy?”. The reader lifts flaps in the picture of Elmo’s room to look for the teddy, and may during the course of the search find the teddy lying on the floor. Here the reader is directly apostrophised in a personal tone, and accepts her role in the dialogue by lifting flaps to look for the teddy. Unless the reader tears out flaps or draws her own teddy bear into the picture (which would be equivalent to the reader of “E-Literacies” making her own copy of the electronic text and making changes to it) she is acting out a pre-defined role in a pre-written script, namely the role of the narratee in a rhetorical dialogue.

The ultimate effect of the ergodic dialogue is to make the reader feel that he or she is participating as an active part in the text. Being an active participant in a dialogue, even in a dialogue which is prewritten, can seem to include the reader in the argument.



# Do we need hypertext or does hypertext need us?

New technology doesn't automatically create new art forms, as Nancy Kaplan points out: in "E-Literacies":

At moments when we are tempted to argue from technological necessity, from some essence or inherent logic of machines, we would do well to remember that the ancient Greeks built steam engines, but only to power toys, that the ancient Chinese invented gunpowder but only to amuse and delight, and that the first printed text appeared not in 15<sup>th</sup> century Europe, but in 9<sup>th</sup> century Korea, where it apparently failed to fulfil its compelling logic. (Kaplan 1995:16)

The fact that hypertext exists doesn't necessarily mean that we need hypertext.

Sven Birkerts, a self-proclaimed sceptic to hypertext, asks whether hypertext is a response "to our collective needs and desires, or simply a logical development

due to changes in technology?" (Birkerts 1994:154) If the former is the case,

Birkerts suggests, hypertext may transform society, as print technology did

centuries ago. If the latter is true, as Birkerts hopes, hypertext will die away, and be remembered as nothing but an odd experiment in the late twentieth century.

## As great a revolution as the printing press?

Print technology has had a great influence on our society: on the way we read, write

and think. The mass-production of text which print made possible has had a

democratising effect, since many more people have gained access to books. At

the same time, print is distancing, as Walter Ong points out in *Orality and Literacy:*

*The Technologizing of the Word*. Compared to hand-copied manuscripts, printed

text is tidy, legible, and obviously machine-made; it is cold and impersonal, at least in technical execution (Ong 1982: 122).

Print also changes the status of the work. Handcopied manuscripts were often part of a dialogue, with margin notes from many copiers. A printed book is finalised and complete; it cannot be changed as a manuscript could. Criticism and commentary will never change a printed text. Electronic texts published on the Web can represent a change in this authority and autonomy of the text. The inclusion of Tuman's response in "E-Literacies" is an example of this.

The proliferation of personal home pages (Web pages made by individuals, not for a company or organisation) on the Web shows an important difference between print and electronic texts. While text on the Web is not only produced with machines but read on a machine, its technicality is far from impersonal. Millions of people have written and "published" texts showing off their CV, their children, their taste in music or books or in other Web sites, lobbying for their favourite cause, sharing information about a topic and so on. This ease of publication stands in stark contrast to the many barriers between "ordinary people" and the authority of the printed book. Like manuscripts, Web hypertexts are part of a dialogue. Few Web sites are hermetically sealed; most link to other Web sites, with or without commentary.

This ease of publication causes problems for the copyright laws that became necessary with the mass-printing of books. "Typography had made the word into a commodity" (Ong 1982: 131). Together with the distance innate in print, this caused people in print-dominated culture to start thinking of their own interior

conscious and unconscious resources as more and more thing-like. Thought and writing became impersonal and neutral things. (Ong 1982: 132) This is no longer true on the Internet.

Actually it is no longer true outside of the net, either. The Internet's home pages are nothing but more (a lot more) of what we already have: photocopied fanzines, family Christmas letters photocopied and sent to 75 close friends, readers' letters to newspapers and even readers' anonymously phoned-in comments. This is the mass production of personally printed texts, rather than texts printed by a publisher or other professional. This development, which began with the typewriter, may be the scene of a paradigm shift from the view of the text as Ong describes it in the age of print, to a more informal, personal idea of the text. But to claim that electronic text is either the cause or the end goal of this shift is to exaggerate. Electronic text exemplifies cultural change and itself encourages, and possibly hastens, that change. But there is more to the change than electronic text. In itself, electronic writing is no more natural or unnatural than any other way we have written in the last 20,000 years.

## **Utopia: the fulfilment of our dreams**

Earlier I argued that the icon bar in the "Break of Day" tutorial is what Richard Lanham calls a visual topoi (see page 20). In his book *The Electronic Word*, Lanham, who is a specialist in rhetoric, holds forth the optimistic thesis that "electronic expression has come not to destroy the Western arts and letters, but to fulfil them." (Lanham 1993:xxi) Electronic text, or the electronic medium, (which allows graphics, sound and video in addition to text) not only follows twentieth

century developments in visual arts, music and literature; it is also, according to Lanham, a prime expression of the revival of rhetoric in all areas of the humanities the last few decades. For Lanham, hypertext technology fulfils needs already expressed in our culture.

That Lanham sees electronic text as a supremely rhetorical genre is particularly interesting. According to him, print privileges the idea of language as transparent. The conventional ideal is that language “should be a crystal goblet to set off the wine of thought it contained.” (Lanham 1993: 74) Writing on computers makes us more conscious of the artificiality of the text, in contrast to this ideal belonging to handwriting, typewriters and print. The freedom to change the layout and visual appearance of our text at the click of a mouse makes us look AT the text rather than THROUGH it:

The textual surface is now a malleable and self-conscious one. All kinds of production decisions have now become authorial ones. The textual surface has become permanently bi-stable. We are always looking first AT it and then THROUGH it, and this oscillation creates a different implied ideal of decorum, both stylistic and behavioural. Look THROUGH a text and you are in the familiar world of the Newtonian interlude, where facts were facts, the world was really “out there,” folks had sincere central selves, and the best writing style dropped from the writer as “simply and directly as a stone falls to the ground,” precisely as Thoreau counselled. Look AT a text, however, and we have deconstructed the Newtonian world into Pirandello’s and yearn to “act naturally.” (Lanham 1993: 5)

In recent decades, authors and literary theorists have argued and acted against this ideal of transparency, reviving the classical rhetorical system and its admittance of stylistic, ornamental behaviour. Electronic text permits and encourages such behaviour, and thereby exposes the artificiality of print conventions, argues Lanham.

Print is an act of perceptual self-denial, and electronic text makes us aware of that self-denial at every point and in all the ways which print is at pains to conceal. (Lanham 1993: 74)

In electronic text, Lanham maintains, features of oral rhetoric such as gesture and sound are resurfacing in typography and icons, that are being used as visual topoi like in the “Break of Day” tutorial: “the digitized word is renegotiating the icon/alphabet ratio which we have since the invention of printing taken almost as holy writ.” (Lanham 1993: 76) When we write electronically, on word processors, and even more so when we compose texts directly for the Web, we control the way the text *looks*, not only which words we use. This self-conscious reflection upon the text we write forces us to look at rather than through the words.

Lanham interprets hypertext and electronic text in general as a parallel development to postmodern and poststructuralist art and theory. Some critics see hypertext as more than merely akin to these trends, calling it the very embodiment of postmodernist and poststructuralist theories. George P. Landow and Paul Delany, editors of *Hypermedia and Literary Studies*, see hypertext as “an almost embarrassingly literal reification or actualization” of postmodernism and deconstruction’s theories of intertextuality, multivocality and de-centeredness (Delany and Landow 1991:10).

“Jacques Derrida continually uses the terms *link (liason)*, *Web (toile)*, *network (réseau)*, and *interwoven (s’y tissent)*, which cry out for hypertextuality,” writes Landow in *Hypertext 2.0*, and continues

Derrida in fact here describes extant hypertext systems in which the active reader in the process of exploring a text, probing it, can call into play dictionaries with morphological analyzers that connect individual words to cognates, derivations, and opposites. Here again something that Derrida and other critical theorists describe as part of a seemingly extravagant claim about language turns out precisely to describe the new economy of reading and writing with electronic virtual, rather than physical, forms. (Landow 1997:33)

This embodiment theory is a tempting way of adding academic legitimacy to a new and unproven field, but it is dangerous. Metaphors are meant to be metaphors. Taking them literally, tempting as is may be in this case, is reductive and misleading.

In the excerpt above, Landow and Delany portray hypertext as fulfilling tendencies already strong in our culture. Lanham does the same, as does Jay David Bolter, in the influential book *Writing Spaces* (Bolter 1991). To Birkerts' question, which I quoted on page 71, these men would answer that hypertext *is* "a response to our collective needs and desires." (Birkerts 1994:154)

## **Dystopia: the Disney version of reality**

Sven Birkerts himself is more sceptical in his book with the melancholy title *The Gutenberg Elegies*. (Birkerts 1994) Birkerts is a literary critic, author of three books of criticism, and is a self-avowed lover of books. Based on his experience as a teacher, Birkerts asserts that most of a generation of young adults, who have grown up bombarded by electronic media, are actually unable to read a novel by Henry James, "or any other emissary from that recent but rapidly vanishing world." (Birkerts 1994: 21)

Birkerts sees the reader's immersion into a fictional universe and her or his creation of a meditative space as one of the major qualities of reading, and believes that this immersion is incompatible with hypertext. He uses his experience reading a work of hypertext fiction to demonstrate this opinion:

[..] the effect of the hypertext environment, the ever-present awareness of possibility and the need to either make or refuse choice, was to pre-empt my creating any meditative space for myself. When I read I do not just obediently move the eyes back

and forth, ingesting verbal signals, I also sink myself into a receptivity. But sitting at my friend's terminal I experienced constant interruption (162)

Birkerts' state of "receptivity" seems to correspond to the ideal of transparent language that Lanham discusses (and discards) in his book. If so, Birkerts' elegies speak for a return to that "Newtonian simplification that made "rhetoric" a dirty word", as Lanham puts it (Lanham 1993: 51). Birkerts admits himself that he is nostalgic and conservative – he loves books and fears to lose the words he adores with the coming of electronic text. Yet he seems incapable of appreciating that the new words also may have beauty in them, if you are prepared to listen. His criticism of his students for finding Henry James too difficult rings hollow when read beside his story of his own aversion to hypertext fiction.

Birkerts' concern is that electronic text is reductive, and his fear that we will lose the ability for sustained thought should not be dismissed too lightly. Birkerts sees multi-media and electronic text as presenting a Disney version of the world, pre-packaged and simplified for easy digestion. And many multi-media packages are just that. "Edu-tainment" is as common on CD-ROM as on TV, and "making learning fun" is one of the market's main ploys in getting parents to buy even more equipment for their children.

But as most other things, hypertext can be construed in very different ways.

Birkerts' fear of reduction is an exact contradiction of Landow and others' stress of hypertext's multiplicity. Birkerts love of immersion may ironically be fulfilled in electronic media too, when virtual reality is perfected. Doubtlessly the interface will with time be smooth enough to avoid the jolt back to reality which comes with having to make conscious choices, as when choosing which link to follow. This

jolt, which Birkerts dislikes, is exactly what Lanham praises in electronic text, and what he calls the basic aim of rhetoric education:

Rhetoric as a method of literary education aimed to train its students to toggle back and forth between AT and THROUGH vision [AT the verbal surface and THROUGH it into "reality"], alternately to realize how the illusion is created and then to fool oneself with it again. (Lanham 1993:81)

Electronic text is not a fixed quantity. It is a possibility: a genre which can be used in different ways, to simplify the world or to express the world's complexity.

Hypertext can in fact offer a kind of immersion that may be at least as conducive to "a meditative state" as that which we can find in books. This kind of hypertext does not follow Pfaffenberger or Nielsen's recommendations. Adrian Miles' hypertextual close reading of a sequence from the film *Singin' in the Rain* is an example of such a text. There is no way a reader can scan this essay for quick and easy information. And that is the strength of this essay. It is written to be *read*, not scanned. This hypertext is the object of my third and final reading.



# third reading: **reading** **a reading**

“*Singin’ in the Rain: a hypertextual reading*” (hereafter referred to as “Singing”) was first published in the January 1998 issue of the online journal *Postmodern Culture*. For readers without a subscription to this journal, the reading has been mirrored at a freely accessible site (Miles 1998). I will be discussing the mirror version of the reading, which may be slightly different from the original in *Postmodern Culture*.

As in my other readings, I will first map the structure of the essay, and describe its contents briefly, and then I will study the links in detail, classifying them as outlined in the analysis of “E-Literacies”. Finally I will sum up how the structure I have found corresponds to the content conveyed by the text.

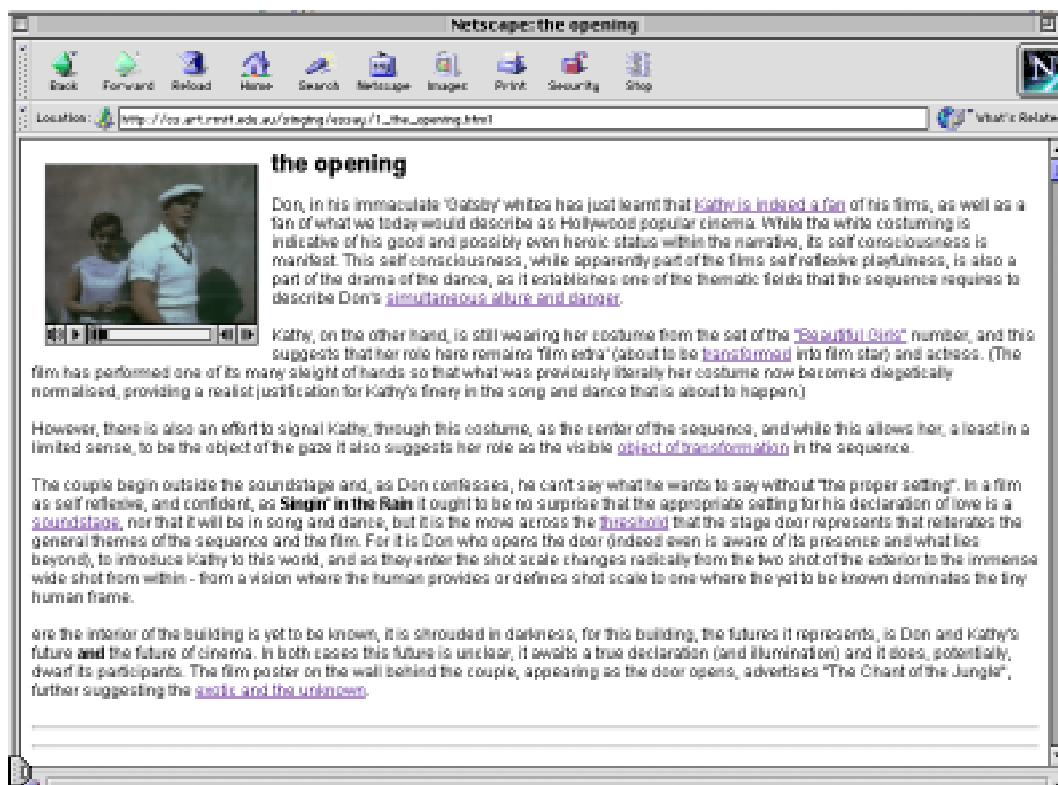
## **Structure**

The structure of “Singing” is not as clear as in “E-Literacies”; it is more associative and densely cross-linked. Although it would be theoretically possible to draw a map of the entire hypertext, as I did with “E-Literacies”, the map would be a criss-crossed mess of arrows which would be of little use in understanding the essay. Instead, I will approach the structure of “Singing” in two ways. First, I will examine how the number of links leading to and from a page affect its role in the hypertext, and second, I will separate the pages into three groups, or thematic clusters, and then study the internal structure of each of these groups. The fact that “Singing” is

not easily mappable does not mean that it lacks structure, it just means that we must look elsewhere than at a map to see the structure.

## Page layout

In “E-Literacies” we saw that the layout of each page mirrored the overall structure of the hypertext. So to begin the exploration of the structure of “Singing”, I’d like to look at the layout of an individual page.



**Figure 14: A screenshot of the page titled “The Opening” in Adrian Miles’ hypertextual reading of Singin’ in the Rain.**

Figure 13 shows a screen shot of the page titled “The Opening”. The picture in the upper left corner is a still shot from a QuickTime video clip of the opening of the movie sequence that Miles reads in the essay. The reader can play and pause the video by clicking icons on the control bar beneath the image.

As you can see from Figure 14, the rest of the page is very straight forward, without any layout frills. All the links in “Singing” are in-text links; there are no navigation bars, overviews, tables of contents or call-outs. As the page layout of “E-Literacies” and the “Break of Day” tutorial suggest the structure of the essay a whole, “Singing”’s exclusive use of in-text links corresponds with the essay’s a-hierarchical structure, which is based on association and elaboration rather than overviews

### **Organisation**

“Singing” avoids becoming “tangled” or “structureless” by focusing on certain pages. These pages are the destination points of many links, and they are in this way given more emphasis than other less linked-to pages, both because the reader is likely to read (or at least see) these pages often and because the reader will see links leading to these pages in many other pages. Although the anchor descriptor doesn’t always bear the name of its target, it usually at the very least suggests a theme, which when repeated and given the visual emphasis of an underlined link, signals that this theme is important in the essay.

Although “Singing” is not as clearly divided into sections as “E-Literacies” is, we can identify three thematic clusters. First we have the six pages which directly discuss the film sequence. I will call this the analysis section. Second are the pages about each of the main characters in the film, which I will name the character section. The third group consists of theoretical pages. In addition there are several unclassifiable pages. The different themes in each of these pages are signalled by the pages’ titles and of course by their content.

These thematic clusters work in close conjunction with the number of links leading to and from each page, as I will show in the following pages. First, take a look at the table below, which lists all the pages in the essay and also shows how many links lead to and from each page. There are 38 separate pages in the essay, and there are approximately 180 links between these pages.

**Table 1: Links in “Singing”, sorted by the number of links to each page.**

page title	links to	links from
Musical Cinema	18	3
Seduction	17	4
Bibliography	14	0
Analysis Sequence	9	10
The Premieres	9	5
Prelude	8	9
Liminal Structure	8	8
The Dance	7	7
The Song	6	8
Cosmo and Clown	6	4
Don and Kathy	6	4
Lina	5	6
Elocution Lessons	5	4
Sequence Structure	5	3
Cosmo	4	2
The Opening	3	8
Inside	3	6
Framing Terms	3	5
Kathy	3	3
Lyrics	3	2
RF	3	1
Sequence	3	1
Openings and closings	3	0
Charactology	2	7
Alchemy	2	6
Greimas	2	5
Cinema and hypertext	2	4
Praxis	2	3
Chambers	2	2
Beautiful Girls	2	0
The Song (2)	1	11
Sequence Reversal	1	6
Metaphor	1	5
Materiality	1	4
Close reading	1	3
Hypertextual Readings	1	2
Charisse	1	1
Stardust	1	1

This table can give us an idea of how important each page (or each idea) is to the essay as a whole. As you can see, the two pages that have the most links leading to them, are “Musical Cinema” and “Seduction”, which are the targets of 18 and 17 links respectively. The average number of links to and from each page in the essay is 4 or 5, so these two pages really stand out as frequent targets. Two other theoretical pages, “Analysis Sequence” and “Liminal Structure” also score high in this count, as targets for eight and nine links. However these two pages are also the departure points for a high number of links, ten and eight. “Musical Cinema” and “Seduction” only have three and four links leading out of them. In addition, the links leading to these two pages are literal and generally unambiguous. For example, eight of the 18 links leading to “Musical Cinema” use the words “musical cinema” in the anchor text, and six of the links use the only slightly different anchor text “Singing cinema”. Ten of the 17 links to “Seduction” use the word seduction in the anchor text. Thus it is easy for the reader to see what page these links are likely to lead to. Once a reader has read these pages once, it is easy to avoid them when encountering links leading to them. Still, even if avoided, the sheer repetition of the words increase their importance in the essay. Using the title of the destination page as the link anchor also makes these links function as definitions or elaborations of proper names.

We can understand more about how the number of links leading to and from each page affects our reading of the hypertext by studying each group of pages in detail.



meant for me” is a part of the hypertext. The sequence is divided into six QuickTime video clips, each of which is embedded into a page dedicated to the discussion that part of the sequence. These pages are “The opening”, “Inside”, “The prelude “The song”, “The song (2)” and “The dance”. These six pages, in addition to “Analysis sequence” form a thematic cluster that I have called the analysis pages

The page “Analysis sequence” functions as an entry point to these pages, and even includes a sort of table of contents:

The sequence can be usefully divided into:

- [introduction](#)
- [prelude](#)
- [song](#)
- [dance and coda](#) (“Analysis\_sequence.html”)

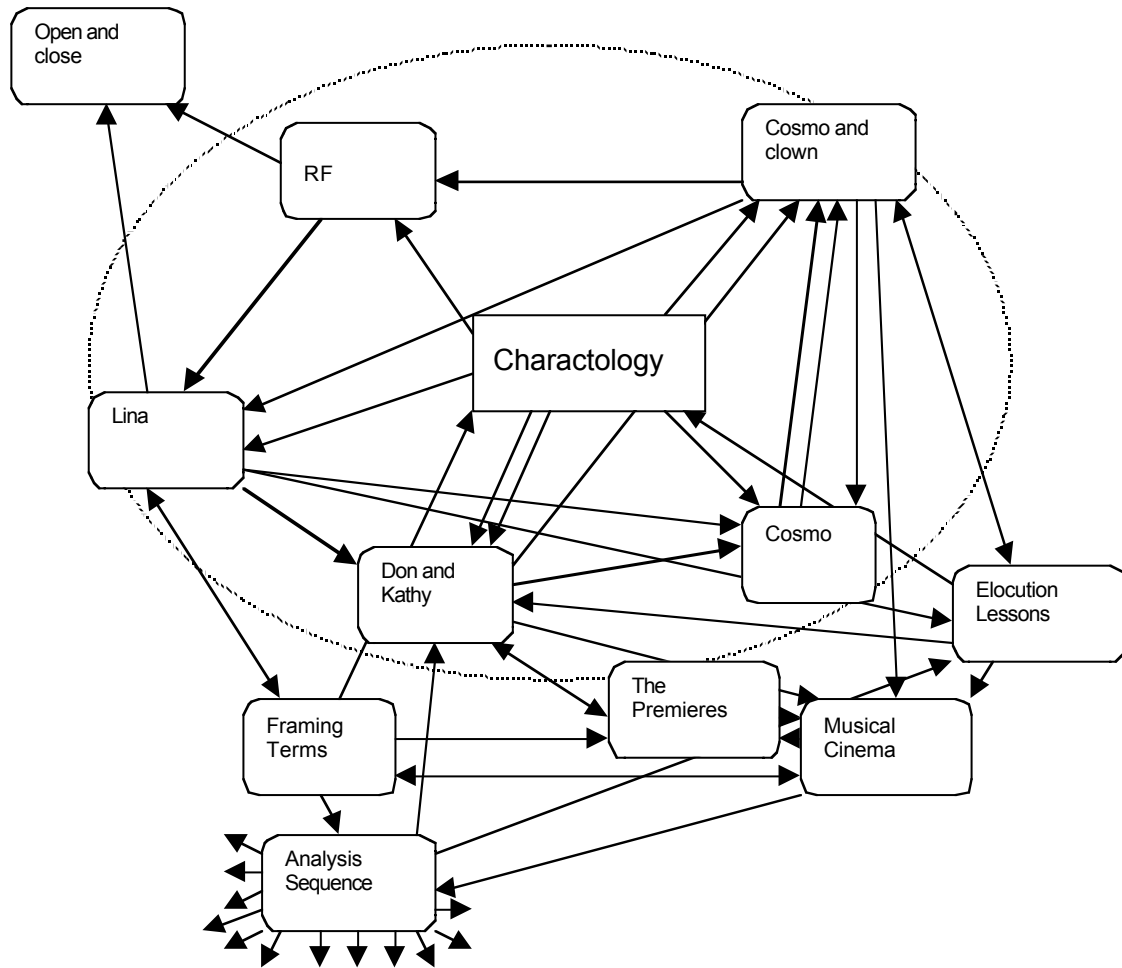
This list is the closest we get to a table of contents or overview in this version of the essay (the *Postmodern Culture* version differs in this respect, as I will discuss further on page 91). Following the film sequence, these pages (and two others that are not listed in the bulleted list) can be read as a sequence, but there are also many links leading out from each page away from the linear sequence.

As you can see from table 1, the analysis pages are the pages with the most links leading both to and from them. These pages are the most central in the essay, as is natural in a close reading. The group has two functions in the essay: it directly discusses the film sequence, and makes connections between the film sequence and the theoretical discussions.

### **The character section**

Another clear thematic cluster in the essay is the discussion of the individual characters. The page “Charactology” serves as a centre or overview of these

pages. But most readers are likely to arrive at a character description page from another page than “Characterology”. This is because there are only two links to “Characterology”, from “Elocution Lessons” and from “Framing Terms”, and up to six links leading to each of the character descriptions.



**Figure 16: A map of the character section of “Singing”**

This thematic cluster is not accessible by a link straight from the first page of the essay, as the other two groups are (more about this on page 88). The character descriptions can be seen as subordinate to the theoretical and the analysis sections, functioning much as definitions of terms. Each character description introduces and describes the character, helping a reader to understand the rest of



the hypertext. Yet at the same time, this section stands alone structurally to a greater extent than the other two groupings. In Figure 16, I have drawn out a map of this section, which shows how self-enclosed the pages are. If you compare this map with the map of “E-Literacies” (Figure 12) you will see that the character section of “Singing” is more densely cross-linked. The number of lines that show links between pages make it hard to see any pattern in the section.

However, if we look past this briar patch of links, there are three points to notice in the map. First, the page “Charactology”, which I have placed in the centre of the map, has links leading to each of the character pages (Cosmo, Don and Kathy, Lina, etc). None of these pages have links leading back to “Charactology”. The only links to this page are from outside the section. Secondly, there is an anti-clockwise circular movement (obviously the direction would change if the map was drawn differently) in the links. The links out from “Charactology” are like spokes in a wheel, where the pages “RF”, “Lina”, “Don and Kathy”, “Cosmo” and “Cosmo and clown” are points on the circumference of the wheel. Although some of these pages have links to many other places, each of them also has a link to the next page on the wheel. So once the reader has left the starting point<sup>18</sup> in the middle of the wheel, “Charactology”, she or he is led around the wheel of characters rather than back to the theoretical discussion of charactology.

This tendency is strengthened by the third point I want to make about this section: there are very few links leading away from it. In Figure 16, the dotted circle

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<sup>18</sup> As noted on page 84 the reader will not always reach the character section of “Singing” by way of the page “Charactology”.

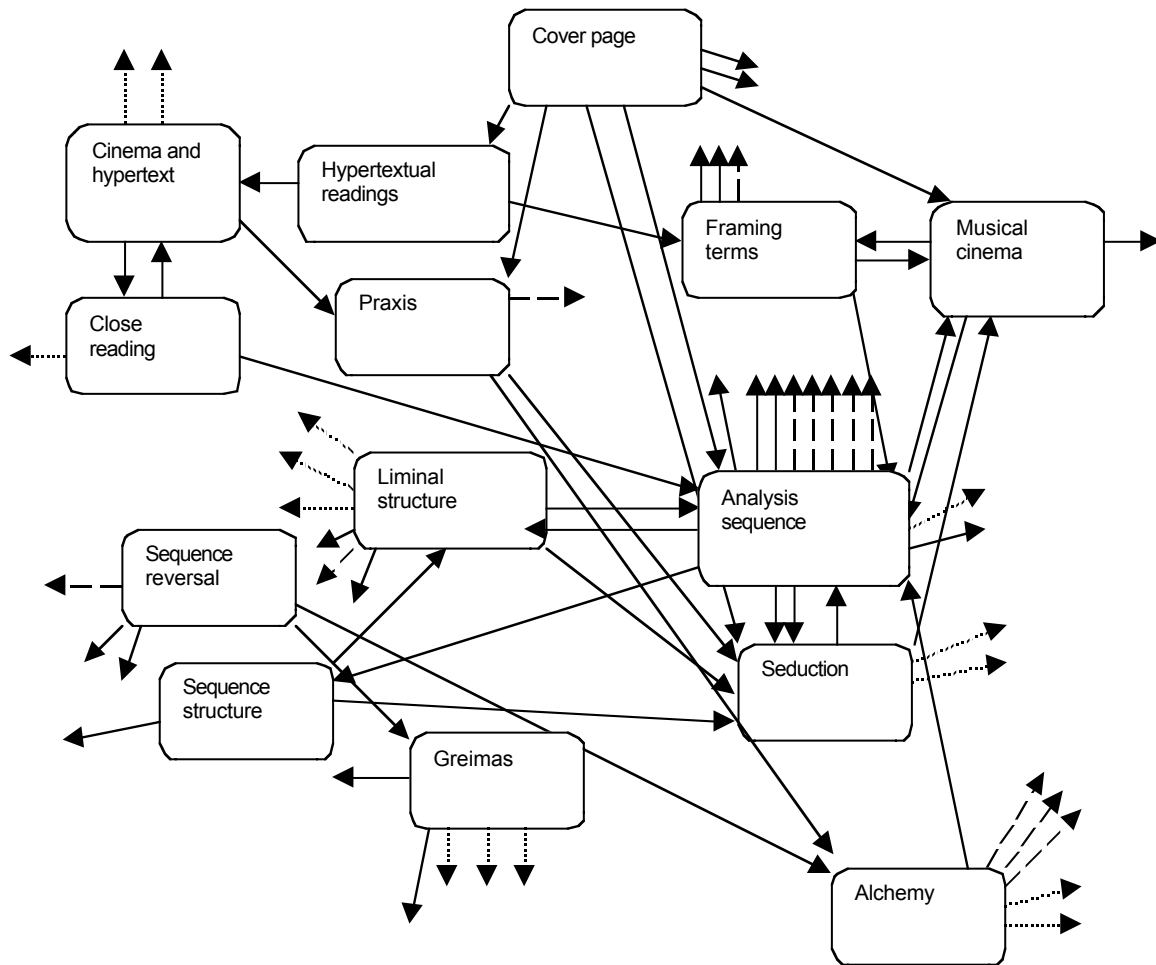
indicates which pages are within the section. The map shows all the links leading from the pages shown, and as you can see, even pages which are outside the circle marking the boundaries of the section do not have many links leading away from this cluster. Two pages (“Framing Terms” and “Musical Cinema”) link to “Analysis Sequence”, which is the departure point for many links leading away from the character section. There is also one link out of the section from “Musical Cinema”. Otherwise, all these pages only link to each other.

### **The theoretical section**

The pages “Charactology” and “Analysis Sequence” fulfil two purposes: the pages are theoretical and at the same time introductions to their respective sections.

There are many other pages in the essay that are purely theoretical, although all of these pages do contain links to other pages with specific examples. These examples are found not only in the character section and the analysis section, but also in other pages which don’t belong to any clear grouping.

The theoretical pages are not clearly grouped together by links between the pages as the character section is; they are connected more by content than by links. The map in Figure 17 shows the most important theoretical pages in “Singing” and the links between them. Dotted arrows pointing out from the pages indicate that a link leads to the bibliography. Arrows made of dashes show links to one of the analysis pages. Ordinary arrows show links leading to other pages. As you can see, there are as many links leading away from the group as connecting the theoretical pages to one another.



**Figure 17: Map showing theoretical pages in "Singing"**

The self-reflective pages shown in the upper left corner of **Error! Reference source not found.** ("Cinema and hypertext", "Hypertextual readings", "Close reading" and "Praxis") form a more closed unit than the other theoretical pages. These pages are most easily accessible from the first page of the essay (index.htm). They thus form a possible introduction to the reading of the essay – possible, though not compulsory, since the reader is of course free to choose other links than the ones pointing to these pages. In content the pages also belong together, as they all reflect upon the way the essay itself is written.

The map suggests no clear structure in the relationships between the other theoretical pages. There are many links between them, but there are at least as many leading to non-theoretical pages. Rather than being an independent section, the theoretical pages form a superstructure to the rest of the essay. These pages form connections and give theoretical insights into the interpretation and description elsewhere in “Singing.”

## The content

In my discussion of the different sections in the essay, I have used the number of links leading to and from a page as indicators of how important the pages are in the essay. The structure of a hypertext, the way the individual pages are linked together, heavily influences a hypertext’s reading. If certain pages are more frequently linked to than others, then the reader is likely to encounter these pages several times, or at least see references to them often. Repetition causes readers to interpret that which is repeated as especially important.

But hypertext is more than numbers, and links are more than arrows between boxes. If certain pages are highlighted by repetition, we should take a closer look at these pages, and at the path the reader may follow to reach them.

The first paragraph of the opening page of “Singing” contains links to three of the most linked-to pages, “Seduction”, “Musical cinema” and “Analysis sequence”:

This work presents a hypertextual reading of a key sequence, the song-and-dance number “You Were Meant for Me,” from Kelly and Donen’s 1956 musical *Singin’ in the Rain*. The sequence is read as characteristic of the film’s general semiotic principles, which combine several levels of seduction to establish an aesthetic claim for a properly musical cinema. (index.htm)

This paragraph is similar to “Way in – way out” in “E-Literacies”: it is like an abstract in a conventional essay with the difference that it links directly to key issues in the reading instead of just referring to issues it will return to. The themes emphasised by this opening are the self-reflexive pages dealing with the hypertextual form the reading is written in, the reading of the sequence itself and the pages on seduction and musical cinema. Apart from the first, these are all parts of the essay which are targeted by many links.

“Seduction” is the destination point of many links, and yet few links lead away from it. This has two effects: firstly the content is given more importance both because it is so frequent a target and because there are fewer invitations to surf away from the page once you’re reading it. Secondly, the scarcity of links out narrows the path onward. Apart from two links to the bibliography (from which there are no online links on) there are only two links leading away from “Seduction”, to “Analysis sequence” and to “Musical cinema”. These three pages are not only the pages with the most links leading to them, but they also form what we could call a centre of the hypertext.

“Seduction” characterises the seduction which happens in the film sequence, and also shows the viewer’s seduction by the movie:

The lure and risk of seduction is this ambiguity around the semiotic status of the event, a pointing to but withdrawal from what is “intended” and a simultaneous pointing to but the concealment of what might be. Hence, just as the sequence represents Don’s seduction of Kathy via song and dance, Don’s use of artifice represents another seduction of not only Kathy but of us. (“seduction.html”)

It is tempting to draw this idea one step further, and see the links in this hypertextual reading of a seductive sequence as a third level of seduction: the link

descriptors “point to but conceal” their targets as they promise a goal which can never be fulfilled quite as the reader desires.

## **Types of links in “Singing”**

As in the other hypertexts I have analysed, by far the majority of the links in “Singing” are literal. However, a greater proportion of the links in this text are figurative than in either “E-Literacies” or the “Break of Day” tutorial.

### **Literal links**

In contrast to the other works I have explored, “Singing” contains very few links from proper names. This is partly because the pages aren’t framed by credits and links to home pages, as in “E-Literacies” and to a certain degree in “Virtual Seminars”. The links from proper names in this essay almost all go from the name of one of the lead characters in the movie to one of the character pages – usually the target page bears the name of the character it discusses as its title. These are not metonymical as are the links leading from the name “Nancy Kaplan” to Nancy Kaplan’s home page, nor is there a one-to-one relationship between anchor and target as there would be in a link leading from the words “Postmodern Culture” to the electronic journal by that name. Instead these links approximate definitions, since they describe the character named and interpret her or his role in the movie. Many of the links leading to “Musical cinema” seem to be definitions as well, especially when the anchor descriptor of the link is the words “musical cinema”. But if we actually read the page which is the target of these definition-like links, instead of just looking at the anchor, we can see that it is not a definition of

musical cinema at all. Instead it is a discussion of the movie's constitution of musical cinema as "a 'proper' cinema" (musical\_cinema.html).

There are no **table of content** links in the version I have looked at most closely, other than the unobtrusive example I referred to on page 83. The version of the essay published in *Postmodern Culture* is slightly different in this respect, however, as the cover page to that version includes a list of all the pages. This list functions as a disordered table of contents. It may help some readers navigate through the text, or to put it more precisely: it may help some readers to feel that they are more in control of the text.

Seeing a complete list of the pages in a hypertext gives readers an idea of how large the work they are reading is, much as when the reader of a book estimates its length by its thickness and the size of the print. Reading a conventional book, we can also tell how much of the book we have read by looking at the page number or by seeing whether the thicker portion of the tome is to the left or the right of the page we are reading. If a reader of the *Postmodern Culture* "Singing" refers back to this table of contents after reading some of the essay, she will be able to see how large a proportion of the essay she has read by comparing the number of visited pages to the number of unvisited pages, since Web browsers show link anchors leading to visited pages as a different colour to unvisited pages.

A table of contents may make the reader feel more at ease and more in control of the text she is reading. On the other hand, she is less likely to read at depth, following the paths planned by the author since it is easier to surf straight to the pages that have the most catchy titles.

Most of the links in “Singing” are **elaborations**. In these links, the target page explains and/or enlarges upon a topic indicated by the anchor text. For instance, one of the links from “The song (2)” mentions Don’s “comments about needing the proper setting” (as elsewhere, the underlined words are the link anchor). The link leads to the page “Prelude”, where the reader can play a video clip of these comments and read an interpretation of their meaning. The words in the link anchor have meaning in two different contexts: they make perfect sense simply as part of the page they are in, but they are also a way to more information.

Many of the elaboration links are straightforward, like the one mentioned above. Some mention the title of the target page in the anchor, as in “the film introduces us to the elocution lessons” (this link leads from “Liminal structure” to “Elocution lessons”) or “is played out as seduction” (from “Metaphor” to “Seduction”). Many of the anchors mention themes that are discussed within the target page, but are not obvious from the page’s title and first sentences. Examples of this can be seen in the link anchor “attempt to combine a developing academic genre”, which leads from “Close reading” to “Cinema and hypertext”, and in the anchor “her role as the visible object of transformation in the sequence”, which leads from “The opening” (one of the analysis pages) to “Liminal structure”, which discusses the many transformations that occur in the movie.

A couple of these elaborations play on opposites, letting the target page contradict the anchor. These contradictions don’t affect the logic of the essay itself, but for instance give emphasis to changes and contrasts in the movie, as in the link leading from “The opening” to “Kathy”. Here the anchor descriptor is “[Don] has just learned that Kathy is indeed a fan of his films”, and the target page is a description



of Kathy and Don's first meeting, where Kathy claimed to have seen none of Don's movies.

Elaboration links with a suggestive rather than a definitive anchor descriptor (as discussed above) are probably the most common type of link in "Singing". Seeing how these links work, I think it is more precise to describe the structure of this hypertext as dominated by elaborations than as associative. The word association suggests too loose and random a connection between link anchor and target. In fact, the connection is concrete and clear in almost all of the links in this essay.

### **Figurative links**

The most commonly used type of figurative link in "Singing" is the metaphor. An example is the link leading from "Cosmo and clown" where the anchor text "the conflicting demands of 'creativity' and the 'pragmatic world'" leads to the page describing the business-like movie producer RF. This and several other links remind me of Jeopardy questions: the link anchor is the answer and the target is the question which the quiz show participants must guess correctly: "What is RF?". Most of the links have the opposite structure: they lead from a fairly concrete noun to a page that enlarges, complicates and elaborates the idea mentioned in the anchor. The reversal in the link from "Cosmo and clown" is repeated several times in "Singing", for example in a link from "Close reading" to "Cinema and hypertext", where the anchor text reads "attempt to combine a developing academic genre with (..) ". As in the first example, the anchor is a slightly elusive description of the more concrete target.

As in “E-Literacies”, there are very few chronological links. The one or two that can be found have to do with the film sequence, which is chronological by nature. The link anchor “As the song concludes” (“The song (2)”) which leads to “The dance” is an example of this.

There is no ergodic dialogue at all. This suits the more formal tone than that which is used in “E-Literacies”.

## Summary

“Singing” is not a structureless essay, despite its lack of external navigational aids, such as navigation bars and overviews. I have described three loose groups of pages, which focus on the analysis, the characters and on theory. These groups each serve different functions in the essay as a whole. The analysis pages, which are the basic close reading of the movie sequence, have sequential links to each other, and also have a high number of links leading out from each page. They are in a sense the back bone of the hypertext, both in content and structurally. The group of pages about the characters in the movie is easy to enter, but is self-contained and has very few links out of it, ensuring that the reader reads through most of these pages before leaving for another section. The last group is the theoretical pages, which are much more loosely structured and both in content and structure form a layer which is more abstract than the other more concrete pages. At the same time these pages connect the other pages together with interpretations and overviews of the structure in the film.

This associative, or better, elaborative, structure is fully harmonised with the content of the essay. The a-hierarchical structure of “Singing” and the lack of

overviews and other obvious navigational aids forces the reader to read more of the content of each page than is necessary in texts that are more clearly divided up into labelled, hierarchical sections. I will discuss this further in the conclusion.

# conclusion

As I noted in the Introduction, very few thorough analyses of concrete hypertexts have been written. Those that I have found deal exclusively with fictional hypertexts. When non-fiction hypertexts are discussed, it is often by the authors of the texts themselves, and the discussion tends to focus on technical solutions rather than the way the hypertext functions as a text.<sup>19</sup> To my knowledge there are no other extensive literary analyses of non-fiction hypertexts to date.

Since this is a first attempt at analysis of a new type of text, I have concentrated on developing methods of interpretation and examining how the texts are structured. As we see more examples of readings and descriptions of non-fictional hypertexts, we will be able to concentrate more on interpretation and less on description. At this stage, however, detailed descriptions are necessary to gain a proper understanding not only of each particular hypertext but also of ways in which we can broaden our general understanding of non-fiction hypertexts.

In my attempt to contribute to the beginning development of methods to analyse hypertexts, I have focused especially on the structure of the hypertexts I have read. I have found that drawing thorough maps of the whole or parts of the hypertext is of great help in understanding the texts structure, and that these structures are often reflected in the layout of each page. It would be interesting to do more work on other hypertexts, investigating different types of possible structures and their relationships to the content of the hypertext.

I have also focused on the links in each hypertext, devising a system for describing them inspired by Burbules' article (Burbules 1998), seeing links as related to rhetorical figures. I sketched a possible taxonomy of implicit links, which could be developed further by examining other hypertexts.

In the analysis of "E-Literacies" I found a particular rhetorical figure, only possible in ergodic texts, that I called the ergodic dialogue. Identifying rhetorical strategies special to hypertext and other ergodic texts is pioneer work that may prove to be useful in future analyses of other hypertexts.

Each of the hypertexts I have studied has given me new ideas for the analysis of all three texts. Yet this study only compares three texts in detail. As more hypertexts are read and interpreted in detail, we will learn more ways to analyse, and to write, new hypertexts.

I have defined the hypertexts I have interpreted as "non-fiction", yet as I have shown, they share many structural features with fictional hypertexts. Can these three hypertexts be said to belong to different genres, or even to a more general genre of non-fiction hypertext? A possible answer to that question has emerged from my discovery that some hypertexts that at first seem structureless, such as "Singing", are constructed in a way that in effect forces the reader to read thoroughly instead of skimming.

The conflict between surfing and reading carefully has escalated with the tremendous growth of Web hypertexts. This conflict has probably existed since

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<sup>19</sup> See articles from any of the *Proceedings* from the ACM Hypertext conferences for numerous

print technology made it easy to find specific information in a book, by means of indexing, standardised layouts, page numbers etc. As Nielsen demonstrates, most web hypertexts aren't read word by word, they are scanned (see page 25). This is exactly the opposite of what the study of literature is about: we read texts carefully and put a great deal of thought into how and what we write about them. We don't want our readers to skim carelessly through our texts, but hope that they will read and consider our work thoroughly.

As I discussed in the chapter on "Structures of hypertext," most web hypertexts are designed to allow and indeed encourage easy surfing. They have a quickly scannable structure which makes it easy to find specific information. However, hypertexts can be structured with quite the opposite goal. "E-Literacies" and "Singing" are examples of hypertexts that are not primarily informative; instead they are argumentative and interpretative. They are structured accordingly, breaking many of the rules Nielsen sets out for good, scannable web sites (Nielsen 1997). They don't use highlighted keywords (other than in the hypertext links), there are few bulleted lists, they do not use the inverted pyramid style and they have a good deal more than half the word count of conventional writing. Instead, these hypertexts use an a-hierarchical structure to prevent careless surfing, demanding to be read thoroughly or not at all.

Birkerts is concerned that hypertext is reductive, as I discussed on page 74. Oversimplification is indeed likely to be the result of writing for people who don't read, but scan. Many of Nielsen's recommendations remind me of the style we find

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examples of this (E.g. Nanard et.al. 1998, Shipman et.al. 1998).

in tabloid journalism, for instance using the inverted pyramid and frequent subtitles. However, hypertext that is written to be read rather than scanned need not be reductive at all. A hypertext such as “Singing” is in fact *less* scannable than a conventionally printed, linear close reading of a film sequence or other text would be.

Rather than seeing the nature of printed texts as different from the nature of hypertexts, it could be more interesting to thinking of all texts as belonging somewhere on the continuum from scanning to reading. It would be intriguing to see a comparative analysis of a linear and a hypertextual close reading, and perhaps also of a scannable and informative linear text and a hypertext at the other end of the continuum.

An important topic that I have barely touched upon in this thesis, is the many types of writing about literature on the Web that are not hypertexts. There are of course many conventional linear documents that are published on the Web, but more interesting are the collective forms of writing. *The Republic of Pemberley*, which I discussed briefly on page 9, stands as an emblem of a new species of literary discourse. The dozen or more discussion groups, the online though written chats about literature, the home-grown sequels to classics and the group readings of novels form a collective interpretation which is very different from the individually authored hypertexts I have studied here.

This collective literary discourse is also present in pedagogically controlled environments such as *Dreistadt*, a MOO<sup>20</sup> where lecturers and students meet and discuss German language, culture and literature (Jopp et.al. 1998). The group discussions about literature in this MOO are preserved as written yet spontaneous dialogues, a development of a form of scholarly writing that has been rarely seen since Plato's dialogues.

These collective critical discourses may become more important, or at least more dominant on the Web, than hypertexts like the ones I have read in this thesis. This collective literary discourse can also be seen as an opposite to the "easy scanning" mentality that appears in most Web sites. The high degree of participation, or of true agency to borrow Janet Murray's concept (Murray 1997), is very different from the undemanding surfing that Nielsen's recommendations encourage. In contrast to the ergodic dialogue I found in "E-Literacies", the dialogue in *Pemberley* and *Dreistadt* is real.

Electronic texts are the latest development in the last 20,000 years of writing. Hypertext and other electronic discourse sets a challenge to scholars of literature. How shall we read these texts? How can we write about them? And how do we write them? This thesis is an attempt to come to grips with these questions. I have found some answers. Hopefully my discussion may contribute to others who ask the same questions.

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<sup>20</sup> A MOO is a network-accessible, multi-user, programmable and text-based interactive system. (LambdaMOO Programmer's Manual 1998: 1)



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