Production and Reading Processes and the Online Newspaper: The *Electronic Mail and Guardian* as hypertext

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Date: 1999
Copyright: Graduate Programme in Cultural and Media Studies

INTRODUCTION

The integration of new technologies into everyday life in the latter part of the twentieth century has been both rapid and all encompassing. The nature of this infusion throughout our working, leisure and home environments has induced a transf ormation in both interpersonal and mass communication. One of these new technologies, the hypertext system, has emerged as a distinct class of complex information management systems. It operates via a computer and is read on a computer screen, thus allowing people to create, annotate, link together, and share information from a variety of media such as text, graphics, audio, video, and animations.

Hypertexts have fundamentally effected a change in today's publishing world by ushering in online publishing. This has taken place because hypertext systems provide a non-sequential mode of accessing and presenting information, as opposed to traditional systems that are primarily sequential in nature. This new way of publishing has introduced a new, efficient, and fast way of disseminating and accessing news. Indeed, it has impacted on the way news is produced, presented and received in an online version of a newspaper.

Due to this new way of news production and consumption in the online newspapers, this study hypothesizes that the *eM&G* differs from its print counterpart and thus its existence has effected a unique way in which its news is presented and received (read). In view of this, this study will examine the way online news is presented and received in relation to hypertext theory and the implications of this for production and reading processes of the *eM&G*.

The study will initially involve a literature review of related work in the field of hypertextuality. This will be followed by a definition of relevant terminologies. The theory of hypertext and how it applies to an online newspaper such as the *eM&G* will then be discussed. One week's issues of the *eM&G* published between 28 September and 2 October 1998 will be examined in respect of: one, the way the onl ine news is presented and received in relation to hypertext theory (Landow, 1994); and two, the implications of this for production and reading processes of the *eM&G*.

SECTION ONE

1. THE THEORY OF HYPERTEXT

According to Theodor Nelson (quoted in Landow 1997: 3) who coined the word hypertext in the 1960s, hypertext is "text that branches and allows choices to the reader, best read at an interactive screen. ...a series of text chunks connected by links which offer the reader differen t pathways." Landow indicates that in computing today, hypertext is defined as "text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open-ended, perpetually unfinished textuality described by the terms link, node, network, web, and path." Landow and Delany (1991: 3) define hypertext as "the use of the computer to transcend the linear, bounded and fixed qualities of the traditional written text. ...[it is] composed of blocks of text and the electronic links that join them." This is the definition of hypertext adopted for this study.

Landow (1997: 2) draws parallels between poststructuralist concepts of the open text and computer hypertext. Three poststructuralist literary theorists, Michel Foucault (19 76), Roland Barthes (1982), and Jacques Derrida (1987), describe text in terms shared by the field of computer hypertext. According to Barthes (quoted in Landow, 1997: 3), in an ideal text,

> the networks ... are many and interact, without anyone of them being able to surpass the rest; ... it has no beginning; it's reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilises extend as far as the eye can reach, they are indeterminable...; the systems of meaning can take over this absolutely plural text, but their number is never closed, based as it is on the infinity of language.

Michel Foucault (quoted in Landow, 1997: 3) on the other hand, conceives of texts in terms of networks and links. He says that the "frontiers of a book are never clear-cut" because "it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network...[a] network of references".

Derrida (quoted in Landow, 1997: 34) conceives of texts as constituted by discrete reading units, what Barthes calls 'lexias'. Derrida recognizes that a new, freer, richer form of text depends upon these discrete reading units. He describes text as the 'mourceau' ; a bit, piece, morsel, fragment; musical composition; snack, mouthful. This mourceau is always detached, with the resultant effect of releasing the grasp or hold of a controlling context.

Alec McHoul and Phil Roe (1998: http://abbott.com.emr.ca/guide/guide.02.html) suggest the following definition of hypertext: "a term which is sometimes extended to include hypermedia in general, [it] refers to software capabilities which allow readers supposedly non-linear forms of access to information via personal computers and terminals." According to them, a typical hypertext document would open with a top-level menu or home page which might include conventional texts, audio recordings, still pictures and/or video samples; indeed information of any kind which can be stored digitally. They further indicate that on selecting

highlighted or coloured words or phrases, or specially boxed graphic frames, a hypertext reader is led to a further screen containing more words and images which explain or expand the initially chosen item, and so on - potentially indefinitely. Each verbal or graphic point can be thought of as a node in a grid of nodes, such that the path traversed in any particular session of reading will be open to the interests discovered by the reader as s/he passes through the grid. Hypertext documents can be distributed on disk or CD, or else posted on mainframes and accessed through file-transfer-protocol (FTP) routines or network software such as MOSAIC, Netscape, Metacrawler or Internet Explorer .

According to Burbules (1996(a): http://www.ed.uiuc.edu/facstaff/burbules/ncb/ paper/rhetorics.html:1), the essential features of hypertexts are nodes and links, the blocks of text from which hypertext documents are composed. The blocks of text are connected together by associative links, where 'associative links' refer to linking blocks of text (lexia/nodes) which focus upon a central theme. Bolter (quoted in Landow and Delany 1991: 109) aptly explains association thus: "association is not really prior to writing, as the term 'prewriting' suggests. [It] is always present in any text: one word echoes another; one sentence or paragraph recalls others earlier in the text and looks forward to still others." For instance, linking between the 'news' and 'sports' section of the *eM&G* or linking between a main story in the newspaper and that story's related or background articles, are forms of associative linkages.

A node is an integrated and self-sufficient unit of information, small relative to the document. According to Keep, McLaughlin, and Robin (1995: http://jefferson. village.virginia.edu/elab/hf10095.html) nodes can consist of a single concept (a paragraph), idea (several paragraphs), or a chapter. In an online newspaper, a node can be a news article, or its 'related article'. It can also be a diagram or picture that is used to demonstrate or explain something the news article addresses. In addition, a node can be an advertisement.

The link makes subtle implications through associations. According to Burbules (1996 (a): http://www.ed.uiuc.edu/facstaff/burbules/ncb/ paper/rhetorics.html: 3) links are made from certain points, and lead to certain points and not others. Certain values are embedded in these decisions. Links therefore create significations: "they are not simply the neutral medium of passing from one point to another". A reader choosing which links to click on and follow will therefore be required to put these issues into consideration. The link is the fundamental structural unit of hypertext since it first and foremost allows the non-linear organisation of text. It is the feature that allows a dialogue within the work itself, but more significantly, it also allows any work to no longer be discrete as we link across documents and, eventually, networks. A fundamental role of the link in hypertext is that it allows any document to contain multiple reading pathways. Landow (1994: 69) remarks that the link also enables the reader to navigate from one text to another, creating her/his path in the network.

Keep, McLaughlin and Robin (1995: http://jefferson.village.virginia.edu/elab/hf10049.html) inform us that a path is a sequence of nodes and links taken while navigating the network and can

be seen as a storyline in fiction and newspaper articles. Readers accessing hypertexts have a choice of reading paths and thus shape their reading experience. In addition, they may be granted certain authorial functions: the ability to add nodes, links, use filters, and so on. The *eM&G* does partially offer these authorial functions by providing space to comment on articles in the chat forum and through e-mail. The readers do not comment on the article itself extending it by adding information, or reducing its size by removing some information. So their comments do not essentially affect the article, as is the case in an ideal hypertext environment.

Bolter (in Landow and Delany, 1991: 111-112) speaks of connections of a hypertext as being organised into paths that make operational sense to author and reader. Each topic (node or article in the *eM&G* for example) may participate in several paths (its 'related' or 'background articles' for instance), and its significance will depend upon which paths the reader has travelled in order to arrive at that point. In hypertext this is called 'decentring' of text. It actually breaks hierarchies and privileges in texts because no one text is more significant than others. A reader randomly picks on where to begin reading the text, and any of the many entry points can be a beginning point.

Decentring gives readers a degree of navigational control unknown in linear texts. Landow and Delany (1991: 18) argue that this control means that "anyone who uses hypertext makes her/his own interests the de facto organizing principle (or centre) for the investigation at the moment." According to Landow (1997: 38), this permits the individual reader to choose his or her own centre of investigation and experience, since s/he is not locked into any kind of particular organization or hierarchy (Landow, 1997: 38). A reader of the *eM&G* will therefore open the newspaper of the day and decide whether to begin with the 'news', 'sports', 'business' or any other information nodes available to her or him. Once inside a 'news' or 'business' or 'sports' node in the *eM&G*, the reader further decides whether to read the 'related articles' at the end of the first article, or to complete the main stories before diverting to 'related articles'. Related articles can take the reader even further into the labyrinth of the *eM&G* network - to stories connecting the reader to web sites of other African countries and the world at large. It is up to the reader to decide what paths to follow.

According to Bolter (in Landow and Delany, 1991: 111-112), in print only a few paths can be suggested or followed, while on the other hand, in an electronic version the texture of the text becomes thicker, and its paths can serve many functions. Bolter indicates that paths can express cyclic relationships among topics that can never be hierarchical. In the electronic med- ium, he observes, hierarchical and associative thinking may coexist in the structure of the text. In the medium of print, the writer may use an index to show alternatives, but these alternatives must always contend with the fixed order of the pages of the book or newspaper. As such, the canonical order of a newspaper is defined by its pagination. All other suggested orders remain subordinate.

Bolter (in Landow and Delany 1991: 112) maintains that a hypertext has no canonical order. Landow (1997: 36) echoes this notion by stating that hypertext does not permit a tyrannical, univocal voice. This is because as

Bolter (in Landow and Delany 1991: 112) asserts, "every path defines an equally convincing and appropriate reading, and in that simple fact the reader 's relationship to the text changes radically. A text as a network has a univocal sense - a multiplicity without the imposition of a principle of domination."

Landow (1997: 64) observes that multiple links to individual blocks of text provide a non-linear arrangement of the text. This kind of arrangement, he states, adds an element of randomness to the reader's text, so that individual reading units take on a life of their own as they become more self-contained, since they become less dependent on what comes before or after in a linear succession. In the *eM&G* for instance, this means although the various files such as 'news', 'sports', and 'business' make up the newspaper, each can be accessed independent of and apart from the others.

Landow (1997:25) develops the notion of a random text by further contending that the presence of multiple reading paths shifts the balance between reader and writer, thereby creating Barthes's writerly text. The presence of multiple paths also creates "a text that exists far less independently of commentary, analogues, and traditions than does printed text." Landow argues that this kind of democratisation not only reduces the hierarchical separation between the main text and the annotation, which now exists as independent texts, reading units, or lexias, but also blurs the boundaries of individual texts. This has implications not only for our conceptions of authors and authority of texts we read, but also for both authors and authorial property, in copyright issues.

Hypertexts can be characterised as either exploratory hypertexts or constructive hypertexts (Joyce, quoted in Eyman, 1995: 1). According to Landow and Delany (1991: 21), in constructive or interactive hypertext systems, the reader can actively link between and among texts rather than merely following predetermined links. They posit that a fully interactive system "allows users to edit, add or delete blocks of text, and also to modify the links between blocks." Constructive hypertexts are thus open in that readers may connect to what is already written and add to it or delete it.

Exploratory or passive hypertexts serve as navigational devices that assist the user in finding and collating information. They close off all avenues but the ones already inscribed. Landow and Delany (1991: 21) say of passive hypertexts: "By a passive system we mean one that is designed by experts to present a particular subject-matter effectively - an encyclopedia, classical art, an income-tax code - and is then 'locked' against modificati on by users." The *eM&G* is written in exploratory hypertext format since it does not allow readers to comment and build on the already existing text, as a constructive hypertext could.

In the *eM&G*, there is no strict editorial control in terms of movement because a reader can navigate through the various files with some amount of independence choosing the paths s/he wants to follow. Nevertheless, in an ideal hypertextual situation, constructive hypertexts would be recommended because they offer the reader the full opportunities of a true hypertext arena - a web of staggering possibilities, hidden layers of meaning, sudden turns,

and dramatic surprises (Deemer, 1994 (a), http://www.teleport.com/~cdeemer/review.html:1). For the *eM&G* to fully empower its readers, the newspaper must strive to develop to the level where readers cannot only comment but also add to and/or delete the news articles. This will liberate the news articles from the tentacles of the various gatekeepers within the newspaper-publishing worl d.

Hypertexts do not function in terms of pages that a reader can read from the beginning to the end, but rather, of files and their links. Reading these non-sequential texts calls for an active reader; one who chooses how to enter, move within, and exit the text. Landow (1997: 5) indicates that in an advanced hypertext system where readers are allowed to annotate texts, hypertext requires and creates an active reader. According to Yankelovich, Meyrowitz, and van Dam (quoted in Landow, 1997: 5), the active reader links together information, creates paths through a corpus of related material, and creates notes that point readers to either bibliographic data or the body of the referenced text. Readers can browse through linked, cross-referenced, annotated texts in an orderly but non-sequential manner.

This non-sequential way of handling and reading text introduces a new process of reading, where it is the reader, not the author, who directs how the news text will be consumed (read). This new process not only greatly challenges the traditional ways of looking at texts, but also, as this study suggests, those of the production and reading processes of online newspapers such as the *eM&G*.

Landow (1997: 2) points to the parallels between computer hypertext and critical theory, where critical theory promises to theorize hypertext and hypertext promises to embody and thereby test aspects of theory, particularly those concerning textuality, narrative, and the role or functions of reader and writer. In hypertext, Landow sees a laboratory in which critical theorists can test their ideas. In explaining that hypertextuality embodies poststructuralist concepts of the open text, Bolter (in Landow, 1997: 2) points out that "what is unnatural in print becomes natural in the electronic medium and will soon no longer need saying at all, because it can be shown."

Landow (1997: 42-43) postulates that the paradigm underlying hypertext is the network. He states that hypertext blurs the boundaries between individual documents by linking these documents together (Landow, 1994: 18) into a 'metadocument', a borderless text that cannot shut out any other document. It weaves a document into a web of other documents. The Web thus forms a global metadocument composed of tens of thousands of interconnected pages woven into a network with a vast number of navigable paths. This network is fluid, ever-evolving, new paths forming, old paths disappearing. According to Landow and Delany (1991: 110), this network has profound implications that redress some of print culture's distortions since it destroys the notion of intellectual separation between documents, that a document is a complete, unique statement. The World Wide Web (WWW or Web) returns us to a more oral notion, that of the ongoing conversation, one that spans the globe - millions of users sitting around a global camp fire swapping tales.

Miles (1998: http//cs.art.rmit.edu.au/projects/media/

hypertext/online-hypertext/critical-theory.html) echoes Landow's (1997: 33) view that hypertext theory […] looks to literary and critical theory and is explicitly interdisciplinary in its endeavour. According to Miles, hypertext relies on various poststructural theories/theorists [Barthes, Derrida, Foucault] to engage with, describe, promote, or criticise hypertext. In all these approaches, hypertext emerges as a technology of reading and writing. Miles (1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/critical-theory.html maintains that

> traditional or classical text is understood to aspire to or represent values such as clarity, authorial intentionality, singular argument and meaning, regularity of tone or voice. Poststructuralism demonstrates these values to be implicit and always already active in all texts. These values have become the qualitative and formal basis of what poststructuralist theory thinks hypertext might or should be.

Miles (1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/the-canon.html) further postulates that poststructural theorists described qualities they believed evident in print based text, not hypertext. However, hypertext theory initially relied on the theories of text, probably a reflection of early hypertext's reliance on print (even the Web was first of all - though briefly, only text). In addition, early hypertext theory appropriated poststructural literary theory to legitimate itself. The more contemporary view of the relation of hypertext to poststructuralism is probably more reasonably described as complimentary, where hypertext makes literal and visible the claims of poststructural theory. Hypertext theory explicitly looks to reader response theory and deconstruction to provide it with the terminology and terrain to extol the virtues of hypertext.

Certain of these virtues as provided by Miles (1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/the-canon.html) include: multiple narratives, writing and dialogue, multiple pathways, plurivocal, and marginalia. These terms are celebrated by poststructuralism and can be applied to the online newspaper. According to Miles, traditionally, texts are understood to be singular in their approach to narrative. This means embodying a singular narrative line, or a single set of events that constitute the narrative (linear and causal structure that all discourse requires) of the text. However, because hypertext is digitally based, it is possible to randomly access it, and so a strict form of linearity becomes unnecessary. In addition, it becomes feasible to offer several narratives, several stories or versions, of whatever the text is about, and these versions may simply provide different ways of characterising the material, or could in fact offer contesting versions or opinions on, or around, the material. Miles therefore concludes that for hypertext theory, the point is very simple in that the effort in many forms of critical practice (and fiction) to embody these various possibilities has always been stymied by the linearity of the page but can now be realised in

hypertext.

Some modes of critical theory have emphasised the way in which all writing performs a dialogue: one, with the texts that surround and contextualise the individual work; and two, in the writing itself (between writer and text, and between text and writer). This dialogue, according to Miles (1998: http://cs.art.mit.edu.au/projects/media/ hypertext/online-hypertext/writing-and-dialog.html), is something that the specific forms of writing in print culture conceal, or even actively repudiate, yet remain fundamental to what it is to write. Hypertext is understood to provide a formal system that does in fact allow such a dialogue. This is by virtue of the link (the fundamental structural unit of hypertext), which allows a dialogue within the work itself, but more significantly allows any work to be no longer discrete as we link across documents and eventually, networks. Clearly the link also allows any document to contain multiple reading pathways, so that "the linearity of the page gives way to the immanent movement of the argument of story" (Miles, 1998: http://cs.art.rmit.edu.au/projects/media/hyper- text/online-hypertext/writing-and-dialog.html).

According to Miles (1998: http://cs.art.rmit.edu.au/ projects/media/hypertext/on- line-hypertext/multiple-pathways.html), the page, whichever way we look at it, has quite strict dimensions. Words and sentences also need a rather strict formal linearity, whichever way we look at them. In view of this, we develop books that privilege a beginning, middle and end. Our dominant forms of fiction, and academic writing, strongly support this model. On the other hand, many of our works also provide mechanisms to counter this linearity - tables of content, indexes and footnotes are all various ways to provide alternative pathways through a text. We also have a history of writing that in many of its creative aspects has explored this formal linearity. Hypertext is able to make these alternative (and apparently lesser) pathways 'central' to the text itself. Hypertext therefore opens up text so it no longer requires a single and dominant centre, but can actively allow the reader to meander through a web of text.

Traditional forms of writing have tended to emphasise a consistency of tone and writing style that is a product of print technology. At its heart, there is a certain protestant suspicion of textuality in our development of black print on white paper arranged in highly regular patterns across consecutive pages. Miles (1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/plurivocal.htm), indicates that this singularity of writing style or voice is the exception rather than the rule, of our communicative competencies. In any given day, he points out, we may speak as mother, father, child, brother, or sister, spouse, employee, teacher and student, to name just a few, and each requires, often literally, a different voice and style. Indeed, in our usual practice we easily shift amongst these voices and contexts simultaneously. Just think of a conversation with friends while at a party and then answer your mobile phone to find your mother ringing you. Hypertext writing, through all its formal properties, is able to utilise and incorporate these different voices, these different ways of writing. Hypertext theory seeks to validate the inclusion of these diverse tones (or tongues) and that the document becomes not only a palimpsest of what has

gone before or after the writing, but becomes a plural arena of a ll those writings that are implicit but excluded in all writing.

Marginal notes (marginalia) such as footnotes or indexes in newspapers, almost asides in traditional writing, can contain extremely important material, and regularly point to other reference s that the particular work is citing in a particular manner. Miles (1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/marginalia.html) argues that these citations are evidence of the way in which writing relies upon other writing, and is formalised in discourses of authority where explicit and even indirect citation is required to be formally noted. Hypertext allows for what is apparently minor (quoted work, other texts, other ideas) to have an authority that is otherwise excluded, and also allows these parts of the text to develop their own links through the work. Furthermore, Miles notes that hypertext can, in theory, link into the very work that the footnote/index otherwise merely indicates, in the process not so much softening the role of the marginal but dissolving it altogether. Here the relation between a principal text and the footnote/index disappears "as the link performs an a ction that has the effect of producing an object that is neither one nor the other, and privileges neither" (Miles 1998: http://cs.art.rmit.edu.au/projects/media/ hypertext/online-hypertext/marginalia.html).

The characteristics of hypertext discussed above, namely, decentring of texts which provides the reader a degree of navigational control; lack of canonical order which empowers the marginalia (thus no text dominates another); multiple links which provide a non-linear arrangement of the text, multiple narratives, as well as multiple reading paths, hence making the texture of the text thicker; and the ability to create dialogue within the text itself and with texts that surround and contextualise the individual text - are new possibilities that hypertext is opening to both the literary and publishing world. It is clear that in hypertext technology fundamental changes are inevitable in the way reading and writing, production, dissemination, accessing and reception of information is being done and will be done in future. A brief survey of the history of technology and media at this stage will help place in perspective the media world upon which hypertext's wind of change is blowing.

SECTION TWO

2. TECHNOLOGY AND MEDIA

2.1 TECHNOLOGY
2.1.1 Implications of new technology for the media

The computer and all its associations play a major role in effecting a transformation in our attitude towards technology and our interpretation of the society in which we live. As Anthony Smith (1998: http://www.wmin.ac.uk/media/ technowhore/theory/medhurst/ch5.html: 1) rightly observes, the computer plays a strategic role in the reorganisation of all the institutions in which it arrives. It is not a silent visitor but an active

agent of change, bringing with it the inexorable sense of its own modernity. In Smith's view, to resist electronic technology is as futile as trying to turn back the tides, since it has already swept over us in ways we have yet to realise. Smith (1998: http://www.wmin.ac.uk/media/technowhore/theory/ medhurst/ch5.html: 1) maintains that "the crux of the matter is not whether to accept or reject this new world but, who is going to use it a nd how."

In McLuhan's (quoted in Smith, 1988: Http://www.wmin.ac.uk/media/technowhore/theory/medhurst/ch5.html:1 concept of the 'Global Village', communication technologies eradicate the physical distance between disparate people, creating an electronic meeting place, and making real time communication between distant parties possible. McLuhan felt that while print detribalised us, electronic media are retribalising us, and reconstituting an oral tradition which shifts us away from the vision-dominated, linear, sequential print paradigm.

It was McLuhan (quoted in Smith, 1988: Http://www.wmin.ac.uk/media/technowhore/theory/medhurst/ch5.html:1) http://www.wmin.ac.uk/media/techno-whore/theory/medhurst/ch5.html:1) who first called attention to the transforming powers of the media. His view is that technology changes the user of a particular technology. He posits that the effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without any resistance. In *Understanding Media*, McLuhan (quoted in Smith, 1988: Http://www.wmin.ac.uk/media/technowhore/theory/medhurst/ch5.html:1) claims that we cannot learn anything of importance about a medium by looking only at its content - it is how they are used that counts - "because our conventional response to all media is the numb stance of the technological idiot." The 'content' of a medium, he remarks, "is like the juicy piece of meat carried by the burglar to distract the watchdog of the mind".

To avoid this numbness, McLuhan argues, we must refocus our attention on the ways in which the technological characteristics of the medium itself reshape our lives not just by giving us new tools to play with, but by reshaping our consciousness on a fundamental and subliminal level. Hypertext, as information technology, has not only effected such changes, it has fundamentally changed forever our way of reading and writing texts.

According to Landow (1997:273), technology always empowers those who posses it, those who make use of it, and those who access it. Landow observes that a fully implemented embodiment of a networked hypertext system "creates empowered readers, ones who have more power relative both to the texts they read and to the authors of these texts than readers of print materials have." The pattern of relative emp o werment (reader-author; student/teacher; teacher/ institution), that hypertext embodies seems to support the idea that the logic of information technologies which tend toward increasing dissemination of knowledge, implies increasing democratization and decentralization of power. The ability of hypertext to free users to follow links wherever they please and to read a text without the prompting of the author are examples of the notions of democratisation and decentralisation of power. Landow (1994: 11) succinctly puts in perspective the power of

digitalised technology in our world today when he says:

> The great and defining power of digital technology lies in its capacity to store information and then provide countless virtual versions of it to readers, who then can manipulate, copy, and comment upon it without changing the material seen by others. When combined with electronic networks, digitalised information technology produces a new kind of information medium in which reading, writing, and publication take on new characteristics.

2.2 MEDIA

2.2.1 The history of print media

According to Fidler (quoted in Stromnes, 1998: 256), after 1920, newspapers were forced to redefine their role with the introduction of a new, far more powerful mass medium - broadcast radio. Like the Internet today, the development of low-cost radio receivers and electronic broadcast media created a great deal of anxiety as well as excitement. In those days, like today, people argued that printed newspapers were doomed by electronic media. In the early years however, broadcast radio had little impact on print publishers.

Furthermore, Fidler notes that during the 1930s and 1940s, newspapers provided more background information and analysis than before to counter the challenge posed by radio which advertisers had turned to. Advertisers realised that broadcast radio could deliver a large national audience. As such they spent a lot of money on radio exposure. As a result of the perceived threat from radio, many publishers revamped their formats and content to broaden their newspaper appeal. They begun to experiment with special sections, departments and packages targeted at specific groups. Weekend magazines, women's sections, children's pages and comics flourished. This enriched newspapers and they survived the challenge brought by the electronic media.

Shortly after World War Two, Fidler (quoted in Stromnes, 1998: 256) observes, newspapers were faced with yet another new and even more powerful electronic medium, television. Television rapidly displaced radio as the customer preferred media. Once again, Fidler says, predictions of the death of print media were rife, although it never happened. Today, however, print media professionals concede that no future redesigning, content improvement, or advanced colour press can be expected to displace electronic media. According to Fidler (quoted in Stromnes, 1998: 256) a revolution brought on by the explosion in consumer on-line and Internet services is unfolding for traditional publishers. Consumers and publishers are exposed to a large amount of information and other content that can be easily accessed. With this vast amount of information comes many opportunities and competition. It is in view of this that the WWW, which operates hypertextually

, has been seen as a new threat to traditional media.

2.2.2 The history of electronic publishing

For many years newspapers had attempted to take advantage of the shift to a digital medium. Paul (quoted in Stromnes, 1998: 256) argues that the first main change was in the shift from hot (print) to cold type (electronic) production systems which swept the newspaper industry worldwide, particularly in the later part of the twentieth century. This allowed newspapers to compile databases of the text that flowed through the production system, and the by-product was the electronic news archive. Newspapers saw the potential of reselling access to information that had initially run in discardable paper form. In view of this, a number of companies began to experiment with a product called 'videotext' in the early 1980s.

According to Stromnes (1998: 151), the intent of videotext was to provide subscribers with electronic access to news, weather, sports, and a variety of services provided by the local newspaper. The concept of videotext was somewhat similar to the Web-TV model of today. The big difference is that Web-TV has access to databases around the world, whereas videotext had access only to the local newspaper database. Since its inception in the USA, the videotext was viewed as a logical extension of traditional printed newspapers. The benefits of these services included the ability to provide news and information in a timely, thorough and more personal fashion. Publishers perceived the benefits of these services as an asset. The assumption was that videotext would become an up-to-the-minute newspaper, capable of providing a wealth of information not typically found in mainstream media. This, however, proved to be wishful thinking (Fidler, quoted in Stromnes, 199 8 : 151). In the mid 1980s, videotext failed because of lack of reader interest (Hollander, quoted in Stromnes, 1998: 257). This ensued because people saw videotext as an advertiser supported electronic newspaper, not an interpersonal communication medium (Fidler, quoted in Stromnes, 1998: 257).

Paul (quoted in Stromnes, 1996: 256) points out that after the failure of the videotext project, several years passed before newspapers aggressively started trying other electronic publishing avenues such as Bulletin Board Systems (BBS) and the commercial on-line services. He observes that by the beginning of the 1990s, three major on-line services - Prodigy, CompuServe and America Online - began attracting a modest base of subscribers in the USA. Around 1993, most ne- wspapers in the USA, motivated by a fear of being left behind, began experimenting with electronic publishing (Paul, quoted in Stromnes, 1996: 256). All three online services provided e-mail, chat forums, Internet access, file transfers, and electronic versions of popular newspapers and magazines.

Philo (quoted in Stromnes, 1998: 257) informs us that Bulletin Board Systems (BBS) first started in Chicago in the late 1970s, and slowly developed in the rest of the USA. These systems presented an extremely efficient way for consumer, commercial and non-profit interest groups to share information. As

such, they provided an interactive information service which enabled customers, via a personal computer and modem, to share information on related interests, exchange advice, and socialise using PC based BBS software.

Another early form of electronic publishing was the CD-ROM technology which became popular in the early 1990s. According to Landow (1994: 9), CD-ROM technology promises near-instant access to large bodies of visual information because it is an application that provides large amounts of read-only memory. Used mainly by libraries and researchers, CD-ROM technology gives the user immediate access to the full texts of newspapers, magazines and encyclopaedias.

2.2.3 Electronic publishing on the Internet

It was not until 1995 that the Web started being used seriously by academics, publishers and the business fraternity, for reading, writing and publishing, particularly in the USA. According to Philo (quoted in Stromnes, 1998: 258) the key assets offered by this new medium include increased connectivity, portability, and accessibility to both wider and narrower market segments. He states that connectivity provides unprecedented opportunities for reader involvement, the creation of electronic communities, and electronic commerce. In addition, by experimenting with interactive services to enhance reader engagement with the franchise, newspapers are keeping user's attention to their Web.

Generally, newspaper advertisements are limited because there is only so much space available. With Web technology, there is no space limitation, so a company can construct a message that is several layers deep, with animated graphics, sound, even full motion video. What this basically points to is the myriad of opportunities that the shift from paper to electronics opens to users. How individuals access, view, sort, and most significantly, pay for material needed, has radically changed.

As an alternative medium to print however, electronic newspapers do have some disadvantages. According to Crosbie (quoted in Stromnes, 1998: 257) print newspapers were seen as easier to use compared to their electronic counterparts. After all, he observes, once a person subscribes to the print newspaper, it is on the doorstep each day. To get newspapers electronically, however, the consumer has to boot up a computer, dial an Internet service provider, run a browser program such as Netscape, and visit a Uniform Resource Locator (URL) day after day, to get the newspaper's site.

Additionally, Crosbie (quoted in Stromnes, 1998: 257) points out that to retrieve what the consumer is looking for, s/he has to wait as each page, photo and graphic, downloads at various speeds while tying up the household telephone line, and paying an access charge for this privilege. However, as more convenient and efficient ways of using new technologies are discovered,

these shortcomings will be overcome.

2.2.4 Electronic newspapers

The electronic newspaper today is comparable to television in the 1940s and 1950s in that it is a medium trying to find itself (Elderkin, quoted in Stromnes, 1998: 258). According to Elderkin, newspapers are becoming electronic in stages, each proceeding stage becoming more powerful and sophisticated than the previous one. The first of these stages is the electronic database newspapers being accessed through the Web. Though no-one can predict the next stage(s), Elderkin (quoted in Stromnes, 1998: 258) and Negroponte (quoted in Stromnes, 1998: 258) think that these may include broadcast newspapers (newspapers broadcast to a receiving device over the airwaves), and virtual newspapers where a user would use a virtual reality headpiece to look at the newspaper. Since these stages are many years into the future, Elderkin contends that in the near future, notepad computers and laptops will be used increasingly to carry text. These small size units can potentially carry an entire library of information. The print industry could eventually evolve into this format.

According to D'Amico (quoted in Stromnes, 1998: 259), though electronic newspapers could eventually take over from print, they will never truly replace print until they are fully portable via a laptop. A portable electronic newspaper will enable the user to carry it on the train, plane, bus, or to the bathtub. Since portable laptops are already in the market, in order to keep pace with technological developments in the field and maintain circulation, newspapers have to provide informatio n in laptop form.

D'Amico (quoted in Stromnes, 1998: 259) identifies the shift in focus from mass-producing goods and services (traditional newspapers) to customising products such as personalised newspapers as another unique aspect of Internet publishin g. D'Amico's view is that in order to provide these customised goods and services at affordable rates, Web newspapers need to be in a learning relationship with the customer, so that the newspaper over time learns more about customer preferences, and gets better at providing them. Landow (1994: 24) observes that contemporary journalism already relies upon networked digital technology, and so hypertext researchers have created prototypes for individual customizable electronic newspapers capable of delivering to the individual subscriber either paper or electronic versions suited to their interests. In Landow's, (1994: 24) view, the system determines these interests either by the reader's conscious decisions or by assessing the reader's preferences and configuring his or her 'paper' according to them.

Hollander (quoted in Stromnes, 1998: 259) notes that electronic newspapers offer an opportunity to bring (connect) people together in ways similar to talk radio. Newspapers can take advantage of talk radio's instant communication and interaction by offering a similar forum on the Web. He proposes that newspapers should also investigate sound and video, which have become significant issues for newspapers. Associated Press (AP), for instance, is

beginning to supply stories with audio and video to consumers.

2.2.4.1 South African online newspapers

A major online "world of news from South Africa" http://www.inc.co.za/), is the Independent Online. The news on this site is updated twice daily - at night and at midday - with material from the *Cape Times*, *Cape Argus*, *Business Report*, *The Star*, and the Natal Newspapers, *Mercury* and the *Daily News.* The *Saturday Star* and *Sunday Independent* material is included on weekends.

This web site is powered by Apple Internet Server Solution and owned by Independent Newspapers. The layout of the Independent Online is of course different from that of the *eM&G*, but since this is an overview and not a comparative study of the various online newspapers in South Africa, I will not delve into these differences. Suffice it to say that just like with the *eM&G*, the Independent Online has space for comments or feedback by readers through the 'guest book' and via e-mail.

Newspapers under the Independent Online umbrella cover the Cape region, Gauteng, and Kwazulu-Natal. Hence they are regional and generally smaller than the *eM&G*. They have some features that the *eM&G* does not have. For instance, the *Saturday Star* has a 'reference' where the number of accesses to their home page since August 7 1996 is given. It sources its news stories from Reuters.

Under the auspices of http://www.24.com some Afrikaans language newspapers are published online courtesy of Nasionale Pers http://livenews.24.com/afrikaans/ die-burger/die-burger.asp). The papers covered here include *Die Burger, Beeld*, the *Natal Witness*, and *Die Volksblad*. News on agriculture is provided in *Agri24*, while financial news is provided in the *Fin24* . The Kalahari.net is a commercial Internet marketing and shopping site. It is apparent that this is a very rich information site catering for any information a person would be interested in.

The24.com and Independent Online newspapers contain South A frican, African and world news in sports, motors, politics, science and technology, business and finance, to name just a few. Most of these newspapers have a link where readers are asked to send their comments on articles to the editor either via letters to the editor, chat forums or through e-mail. Consequently, to some extent these newspapers are interactive.

2.2.4.2 The Electronic Mail & Guardian (the eM&G)

The *Electronic Mail & Guardian*, best known as the *eM&G* is first cousin to the *Weekly Mail & Guardian*, founded in 1985 by a group of retrenched journalists from the deceased *Rand Daily Mail.* The *eM&G* is a pan-African electronic

newspaper, published every day, Monday to Friday. According to the eM&G homepage, "it is aimed at readers serious and not so serious" http://www.mg.co.za/mg/services/mgoview.htm#guide).The *eM&G* specialises in breaking hard news, has a daily entertainment guide, daily features from the rest of Africa, a dai ly guide to what's new on the Internet in Africa, in addition to what is covered in the *Weekly Mail & Guardian (M&G)* http://www.mg.co.za/mg/services/mgoview.htm#guide).

According to the *eM&G* website http://www.mg.co.za/mg/services/mgoview.htm#guide).The *eM&G*, the first online newspaper in Africa, was founded in 1994 as a service to readers abroad. It began life as an e-mail subscription product that allowed readers abroad to receive their *Mail & Guardian* newspaper hours before it reached subscribers in Johannesburg. It expanded into a searchable online archive (published in partnership with Sangonet, the country's oldest Internet Service Provider). A World Wide Web (WWW) site was added, which in turn progressed from producing a weekly mirror of the printed newspaper to generating its own daily news and entertainment.

In a Centre for Cultural and Media Studies (CCMS) MA class discussion held in April 1998, students argued that the *eM&G* is a newspaper meant for intellectuals. In addition, students said in the same seminar that the newspaper influences the way people think and helps them form opinions. The students further felt that the *eM&G* is unique in that it takes grassroots issues and points them out to the attention of policy makers, hence a newspaper which addresses current issues as they impact on people in society. For these reasons, the newspaper was said to hold a unique position in society.

The notion that the *eM&G* is an 'intellectual' newspaper, places it in a category that sets it aside from other newspapers. It means that it is read by a certain class of people. Indeed, the *eM&G's* early shareholders were liberal professionals, academics and business leaders. During the apartheid days these shareholders contributed a few thousand rands each as a gesture towards maintaining a tradition of critical journalism in an increasingly harsh political climate (ht tp://www.mg.co.za/mg/ services/mghistory.html: 2).

Today, the *eM&G* readership has broadened to include South Africans abroad, would-be tourists, foreigners with special interest in Africa, or South Africans who prefer their news delivered fast and free of charge (http://www.mg.co.za/mg/ services/mgoview.htm#guide:1). It is clear the readership is made up of people who are in the upper class segment of society because they are the ones who have access to computers. An "extremely argumentative bunch" (http: / /www.mg. co.za/mg/services/mgoview.htm#guide:1) that will engage in an Internet discussion forum has to be educated, working class, or University students. A journalist working for a newspaper with this kind of readership must therefore be skilled, probably holding some training in journalism.

The *eM&G* sources its news from its own reporters, correspondents all over the world, and news agencies such as African Eye News Service (http://www.mg.co.za/mg/services/goview.htm#Web), among other

international news agencies.

Advertising sales for the *eM&G* are handled by Oracle Online, a subsidiary of Multi-choice (the *eM&G's* largest shareholder (http://www.mg.co.za/mg/services/goview.htm#Web:1), and one of the best-known advertising sales operations in the country. According to the *eM&G* website http://www.mg.co.za/mg/services/goview .htm#Web), Oracle sells banner advertising on the *eM&G* as part of a 'network' of several of the largest sites in the country. Oracle's advertising model is based on a sophisticated US-developed system called Double-Click. It is a system which not only allows for 'rotating ' banners which change each time a reader returns to a page, but also can monitor exactly how many times a particular advertisement has been 'served' from a given page. Advertising online is expensive. As such, mainly business firms will tend to advertise in the *eM&G*.

The *eM&G* website http://www.mg.co.za/mg/services/mgoview.htm#guide) informs us that with time, the *eM&G* has evolved into a separate product run by a separate company in its o wn right, with its shareholder the Internet Service Provider, M-Web. M-Web is part of the Multichoice group and one of the largest players in the dial-up subscriber market. Circulation was just under a million page accesses in the second quarter of 1998.

According to Stephen Quinn (1998: 51), researchers have tended to classify news organisations into 'A' and 'B' categories, where the former are willing to spend time and money reporting complex stories. 'B' organisations constitute the rest. 'A' organisations display a richer vision of the complex issues of the community, nation and the world, and they are willing or able to devote resources to reporting them. In South Africa, the most likely candidates for category 'A' are newspapers such as the *eM&G* and *24.com* . Many small newspapers however, can come together, as is the case of Independent Online newspapers, and get into the Internet as a group. This is cheaper than having each newspaper going online individually.

In research done in Australia in 1997 by Quinn (1998: 51), he found that, based on the 'A' and 'B' categorisation, the most likely newspapers to devote resources on the Internet would be the quality press in the major capital cities. Additionally, the research indicated that the availability of Internet resources and training, and the frequency of Internet use among reporters in quality metropolitan dailies was much higher than in regional dailies. This observation can be applied to the *eM&G* because it is basically an urban produced online newspaper. It is also true to state that the *eM&G* mainly caters for an urban population who have more access to technology. Facilities for training are obviously available in urban areas. The rural folk are disadvantaged because facilities that enable them to utilise new technology are more easily available in towns. For example, according to a survey carried out in 1998 by Web User Survey (WUS) (in Stromnes, 1998: 260), Internet access in South Africa currently stands at 1.8 million users. In a country with a population of about 40 million, this number of users is very low. I am sure that out of the 1.8 million users, probably less than one percent are based in rural areas. Therefore when we celebrate the empowerment potential of hypertexts, we must bear in mind that the majority of the population is left out. This has implications for news dissemination and the democratisation

that comes with hypertexts.

The WUS also indicated that the Internet is mainly used by the top income earners, people earning more than R11 000 personal income. The average South African Internet user is approximately 35 years old. According to the survey, this Internet user is urban and educated, and accesses the Internet every day. If he has not spent money purchasing access to the Internet yet, he plans to do so shortly. According to the survey, the concept of paying in order to access an Internet site was acceptable, with 36% of users saying they would pay for usage and 24% stating that they would pay a monthly subscription fee.

The WUS figures do not depict a true picture of the South African Internet user scene. In educational institutions, for instance, students have access to Internet facilities and they use them. Therefore to say that the South African Internet user is 35 years old is not true. In the same vein, the income element is not representative of the true picture of the South African scene. There are many homes with computers that are accessed by school going children and unemployed people. As such, the *eM&G* is read by this category of people. The *eM&G* cannot therefore be said to be an elite newspaper. The problem however, can be said to be that it does not reach as many people as it should because of problems relating to availability and accessibility of facilities. The assumption by the WUS that the South African Internet user is male is absurd. Many women do use the Internet. Evidence from chat forums, for example, shows that many women contribute to ongoing debates.

In an ideal hypertext environment where readers can annotate and add to texts, it is difficult to determine the author of the article. In the eM&G, readers can comment on articles via the chat forum and e-mail, but no changes can be made on the actual body of the article. This raises the issue of copyright, which I believe in an advanced hypertext *eM&G* will become an interesting area of investigation. Such an investigation would involve finding out what an unmoderated news article will look like and how the original article eventually develops and changes with such development. An intriguing fact to find out would be: to whom is this article going to belong? Who will be its author?

2.2.4.3 Copyright and hypertext

According to Keep, McLaughlin and Robin (1995: http://jefferson.village. virginia.edu/elab/ hf10027.html), intellectual property rights are currently enforced through trademark and copyright. Trademark protects names or graphic symbols associated with a product or manufacturer. Copyright protects the expression of intellectual labour itself, though not the ideas contained therein. Though specific laws vary by country, Keep et. al. argue, it is generally acknowledged that a work is protected upon creation. Copyrighted works may not be used without the copyright holder's permission, with some except- ions. The primary case is 'fair use', which allows relatively small passages to be used for scholarship or research. The copyright holder is not necessarily the author or creator of the work, since

copyright ownership may be transferred; in some cases (e. g. work for hire) this may be considered to have occurred automatically.

Application of intellectual property to electronic hypertext has remained intriguing so far, and there is no explicit precedent anywhere in the world today. Keep, McLaughlin and Robin (1995: http://jefferson.village.virginia.edu/elab/hf 10027.html), review six characteristics of digital works which might impact on copyright law. These are, ease of replication, ease of transmission, ease of manipulation, disappearance of work behind an interface, difficulty in distinguishing between classes of works (media), and potential of new classes of work. These characteristics change the sense of a separate, unique text that is the product - and hence the property - of one person, the author - a t rademark of print technology. Hypertext changes all this because it does away with the isolation of the individual text (Landow and Delany, 1991: 17). Landow (1997: 300-306) argues in support of some form of electronic polling (similar to that used in th e music industry) to ensure authors get royalties in a hypertextual environment.

At the end of some of the eM&G pages there is evidence of copyright - the reader is warned that it is illegal to reproduce any of the *eM&G's* articles without permission from the editor. It is difficult to monitor or implement this warning in online newspapers because documents can be accessed and reproduced with ease in a free web site. In addition, the fact that transmission of such information is so easily done via a free superhighway of information; indeed, the fact that information can be so easily manipulated poses a challenge to matters of copyright. Hypertext has indeed brought to the fore challenges that are making scholars rethink authorial rights and hierarchy and power of texts. As Taylor and Saarinen (1994: http://www.wmin.ac.uk/media/technowhore/theory/medhurst/ch 5.html) declare,

> Copyright laws were formulated to regulate the exchange of the printed text. During the epoch of print, authorship and ownership were in separably bound. Telewriting, by contrast, obscures the identity of the author. In a manner reminiscent of oral culture, the text is, in a certain sense, authorless. More, precisely, the proliferation of authors eludes the author's voice. In the absence of the author, it is no longer clear who owns the text

SECTION THREE

3. PRODUCTION AND READING PROCESSES

3.1 Introduction

As Landow (1997: 64) points out, hypertextuality radically changes the experiences that reading, writing and text signify. Hypertextuality according to Landow adds an element of randomness to the reader's text since the reading units (nodes) take on a life of their own and become less dependent on what comes before or after in a linear succession. These aspects impact on the nature of production and reading of the news text. As a result, the mode of production, and the experience of reading hypertext newspapers is very different from those of the print version. For instance, the former requires a more active and critical reader, who can assume an interactive reading role since the text branches and allows choices to the reader to select where to begin reading and how to follow up this reading process. These unique ways of doing things in hypertext are the issues that this section will interrogate. 'Production processes' refers to the non-linear process through which an online newspaper is produced, while 'reading processes' refers to reading hypertext as a discontinuous or multi-linear process.

3.2 Production processes

The basic unit in today's online environment is a screen or frame on which an online newspaper is consumed (read). An online newspaper is produced in a non-linear way and is read on a screen. In other words, it is produced hypertextually. Hypertexts do not function in terms of pages, but rather, of files and their links. A beginning for the *eM&G* of 28 September 1998[1,] (Appendix 1) can be called a 'diagram' of the major files and their links. Entry into the newspaper can be in any of the files - news, business, sports, M-Web, Looking for

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[1]The layout and many features of the five issues of the *eM&G* selected for this study are the same. As such I will use the issue of 28 September 1998 as my main point of reference, although ot her issues are also referred to.

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a *PC?/ M-Web Mall Shop from your Desk , Archives* or *Specials.*

Once a reader goes to the 'first page' of each of the five issues of the *eM&G* selected for this study, the layout is the same (as that of Appendix 1) except for one area. At the *M-Web Mall* link, the words "shop from your desk" appear in the issues of 28 and 29 September, and 4 and 5 October 1998. In the issues of 30 October, 1 and 2 October 1998, instead of a *M-Web Mall* icon, there is a doll-like image of a girl, and the following words "Sly," written in large letters. Underneath "Sly" is written, "Urban Survival Guide". Alongside these words is written "She's kinda cute." On this first page, the day, date, and

A fundamental aspect of online production is the way the virtual image of a text is produced and read on a surface, the screen, behind which there always

exists an unbounded field of other texts. According to Landow and Delany (1991: 38) the textual universe would include a larger visual component - graphics, images and animations that are as easy to link as other texts. For instance in the *eM&G*, these would be the sections on *Specials - Madam & Eve, Cyberspace today , Africa Features, Entertainment, Business, Sport, Home* and *Contents* (Appendix 1), and *Archives* (back issues up to 1996 - (Appendix 2)). Text is thus produced and experienced as Barthesian networks (Landow and Delany, 1991: 38), providing dynamic graphic maps or web views.

In the same way that hypertext has broad implications for literary practice and education, it also has implications for online newspapers. The online newspaper is produced in an information medium that allows for the creation of electronic links between passages of text, or to annotate (level not yet reached in the *eM&G*. Based on the fact that the online newspaper is a digital product Berger (1997: http://journ.ru.ac.za/staff/berger-misait.html: : 7) provides a distinct picture of what a digitalised newspaper entails. He notes that while a print newspaper is made up of atoms, hence laborious to copy and expensive to transport and tamper with, an Internet publication (hypertext newspaper) consists only of bites. These are digital codes that make it possible for instant copying into a replica millions of times over. In addition, information can be shunted around the globe and into space at near real-time speeds, and can be mixed and matched at will. A print newspaper has to be printed many times, transported around vast distances, and at best cut and pasted into a scrapbook. A digital publication like the *eM&G* on the other hand, can be copied in incomparable volumes, disseminated through networks of telephone lines or through the airwaves, be linked to other kinds of data - be they text, audio or visual - and be easily customisable.

The networking of bites is another powerful aspect of digital publishing. Berger (1997: http://journ.ru.ac.za/staff/berger-misait.html: : 8) posits that "there is a quantum leap in terms of how information can be utilised as a resource in terms of its archiving, flexibility, searchability, and its flow, compared to what was possible under the previous information technologies". Berger observes that traditionally, mass media (radio, television and newspapers) have been separate entities. They are now moving towards a point of intersection, where the digital data from the one are cross-linked to the digital data of another. Database publishing is therefore the way forward for media publishing in the twenty-first century. In the words of Berger, this means, for example, a newspaper company resolves to undertake the business of collecting and circulating information through a range of outlets rather than being confined to only putting that information down as ink and paper: "What makes the evolution into a multiple media, and also multimedia, possible is the common digital format that all the information is coming to share, be it in text, sound or image" Berger (1997: http://journ.ru.ac.za/staff/berger-misait.html: }: 9).

McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide.02.html) indicate that there is an implicit hierarchy in the way links and other certain aspects of the layout of a hypertext document are set out. The author of a hypertext document deliberately presents many layers of 'exposed' sub-textual information and this influences the movement of the user. Keep,

McLaughlin and Robin (1995:
http://www.wmin.ac.uk/media/technowhore/theory/medhurst/ch2.html:2)
further develop this notion by stating that electronic texts have different
hierarchies and so the imposition of structural features such as link classes
and node types results in new privileges and centres. An expansion link, for
instance, has more authority than a reference or note (index link in
newspapers for instance) link. However, even though the latter is less
authoritative, it uplifts the reference/note/ index (what is called marginalia) to
the level of an independent block or unit of information. In print, marginalia
always holds a subsidiary position in relation to the entire text, and is not part
of the main text. The author's choice of one class of link over the others,
therefore, impacts on the hierarchical information communicated to the user.

These production aspects can be demonstrated in the *eM&G*. In the issue of
28 September 1998 (Appendix 1, page 2) for instance, the main news story
on the front page has a larger headline than that of the late flashes and news
in brief next to it. The larger headline depicts what article is deemed
significant by the editor. Another element of production that can be deduced
on the first page of each of the five selected issues of the *eM&G* is with regard
to the advertiser's symbol *M-Web Mall*. It is very prominent in that it is
written in capital letters and imaged in a peculiar way. It keeps changing to
other advertisements such as Looking for a *PC* ? and it flashes on and off.
Then it tells you: "shop from your desktop."

The first page of the sports section (Appendix 1, Sports, page, 1) of any
edition of the *eM&G*, has the word 'Sports' written in capital letters and in
bold. The font size (type) is the second largest on the page, after the title
ZA*NOW. The sports articles' headings are in large font size, but not in capital
letters, and they are bold. The layout of *news* sections of the five editions of
the *eM&G* examined in this study are also done in a similar manner - bold
headlines in large font sizes, quite conspicuous on the page (Appendix 1,
News, page 2). At the lower part of every front page of the news sections of
each of the five editions of the *eM&G* are the words "TODAY IN AFRICA"
(Appendix 1, News, page 1). The words are in large bold capital letters. The
main news start on the next page, leaving a whole one-third of the page
blank. The news articles could have begun after the words "TODAY IN
AFRICA" (like they have done on the sports section - see Appendix 1, Sports,
page 1). Why is this space left blank?

At the end of the three sections n*ews*, *sports*, and *business* there follows a
page with a summary of other sites one can visit while in the *eM&G* (Appendix
1, Business, page 6). For instance at the end of the *news, business* and *sports*
sections of the five selected issues, the QUICK TOUR OF THE SITE is
presented, written in bold capital letters. This has to do with the design that
the producers of the eM&G have used. It is a simple one enabling readers to
move from one news article (node) to another since the attached material is
clearly identified. In addition, the nodes are co mplete in themselves and their
relations to other nodes (related articles) are intelligible. This is significant if
disorientation is to be avoided.

Some problems associated with hypertext's nonlinear form, namely:
disorientation, cognitive overhead and missing context clues have been

associated with poor hypertext designs. The cause of disorientation in reading hypertext for instance, which has been defined by Keep, McLaughlin and robin [sic], 1995) as "the tendency to lose one's sense of location and direction in a non-linear document", can be traced in badly designed systems lacking sufficient context clues and navigation aids. It is vital then that hypertext systems have quick and easy methods to exit the system such as 'return to the "home" node', 'title page', and 'retrace one's path'. In addition to instilling quick and easy methods to exit the system, increasing the number and usefulness of navigational tools; providing link typing; and providing link classing could also be useful. In the *eM&G* , each news story is followed by news articles related to this story. The links represent relationships between news with the same theme, and the attached material is identified by giving the headings. This enables the reader to select a link or path that flows naturally and meaningfully in relation to the original news story.

Cognitive overhead, another problem identified by Keep et al, refer to "the additional effort and concentration necessary to maintain several tasks or trails at one time" (Keep, McLaughlin and Robin, 1995: http://jefferson.village. virginia.edu/elab/hf10098.html). This can be minimised by a well-designed hypertext system, and as indicated above, this is minimal in the *eM&G.*

It is therefore clear from the above that it is the responsibility of the hypertext producer to ensure tools are provided to enable users to make sense of the hypertext environment they create. Burbules (1996: 7) succintly explains the significance of providing navigational tools. He argues that in a hypertext environment, the new inventions of knowledge will be heuristic: "useful ways of putting things together in the face of a morass of overwhelming information." He suggests three kinds of heuristics - chronological sequence, causal relations and analogical similarity - as the kind of interpretive tools that the typical user of hypertext will need in order to find and access meaningful information related to the text s/he happens to be reading. Burbules also points out that the question of how the 'interface' is designed must be addressed since a hypertext will influence its usefulness and accessibility. He says, and this is crucial for the production of the online newspaper, that

> [M]any readers will need to be able to call up for reference explanatory materials that make explicit to them the implicit structures of the hypertext system. Indexes, charts, maps, glossaries, concordances, search engines, and so on, become more than just guides to moving around a hypertext; they become crucial textual elements themselves, replete with their own interpretive assumptions, emphases, and omissions (Burbules, 1996: 7).

As indicated above, the *eM&G* has adopted a design that minimises disorientation and cognitive overhead by providing links that are organised according to the news articles and those events impacting on the news story in the recent past.

3.3 Reading processes

According to John Slatin (quoted in Delany and Landow, 1991: 154) reading is a sequential and continuous process. The reader is expected to begin at a clearly marked point whose appropriateness has been determined by the author. In addition, the reader is expected to proceed from that beginning to an ending which is clearly marked and determined by the author in accordance with her/his understanding of the subject matter and the reader. The reader's progress from the beginning to the end of the text follows a route which has been carefully laid out for the sole purpose of ensuring that s/he does, indeed, get to the end from the beginning, in the way the writer wants her/him to get there.

In *Reading* , Frank Smith (1985: 103) says that "any definition of reading should recognise the selective way in which we read all kinds of print, not striving mechanically to 'extract' all the information the author... provides for us, but deliberately seeking just the information that we need, like finding a route between two places on a map". Hypertext is changing this way of reading by multiplying, varying, and randomising access/entry into these paths on the map.

According to Slatin (quoted in Delany and Landow, 1991: 158), the rapidly evolving technological environment makes hypertext possible by permitting the embodiment of a very different set of assumptions about readers and reading, indeed, about thinking. These assumptions in turn form the basis for decisions made in the process of creating a hyperdocument. Thus reading the eM&G in hypertext is a discontinuous or non-linear process. Reading the print version of the *eM&G*, on the other hand, is a semi-sequential process. The reader can begin reading the first page story and at the end of the story on page one of the newspaper, s/he is instructed to go to page five where the story is continued. However, the reader can choose to go to page two or to the back page to read the other stories there before going to page five. Alternatively, the reader can read the second story on page one of the newspaper before proceeding to page five to continue with the first news story. This shows that reading the print version of the *M&G* is neither the same as reading a book, for example, nor is it the same as reading an online newspaper.

When reading a book, the process is more linear. The reader moves from the first page to the last one in a sequential manner. As in a conventional text, the reader's progress in the M&G (print version) is largely governed by the arrangement of the material. According to Landow (1994: 24), the newspaper exemplifies a document composed of discrete subjects, often grouped according to subject categories, such as local, international, sporting, entertainment, or business news. To read it, one follows the guidelines provided by the editor. As such, the burden of prediction, to decide how to read the news, falls more heavily upon the reader than on the writer. This situation, however, becomes considerably more complicated in hypertext. This is because in hypertext the reader must decide and choose which link to

follow.

Reading in hypertext allows the reader to begin at a point of her/his own choice. This point is chosen from a potentially very large number of possible starting points. The reader proceeds from the point of beginning by following a series of links connecting documents to one another, exiting not at a point defined by the author as 'The End' but rather when s/he has had enough. To make these decisions in an intelligent way the reader must be able to make reliable predictions about the consequences of particular choices. This means that a reader of the *eM&G* must have a certain level of education to be able to access it, navigate her/his way around it, and read it. The reader must not only be dexterous, but consciously aware of exactly what s/he is looking for. Due to the large size of material, a reader may get lost or become badly disoriented (Slat in in Delany and Landow, 1991: 158). The *eM&G* and *24.com* are very large and it is easy to get lost or become disoriented. However, relatively adequate tools have been provided to help the reader at least get to a previous document or go back to the beginning of the document being accessed. As Landow (1997: 4) charges, changing the ease with which one can orient oneself and pursue individual references within the context of an online newspaper transforms both the experience of reading and ultimately the na ture of that which is read. A well designed hypertext system helps achieve this.

How does the nature of that which is read change? As noted earlier in this study, because hypertext is digitally based, it is possible to access it randomly, thus eradicating a strict form of linearity. It therefore becomes feasible to offer several narratives or versions of whatever the text is about. When a reader 'A' gets into the *eM&G* of 28 September 1998 (Appendix 1), let us assume s/he enters at the entry point 'news' ('News, page 2). S/he goes into the article on the Lesotho invasion by South African troops titled 'Troops will stay in Lesotho - SADC'. At the end of this article, there is a link 'Monday's earlier reports' which the reader decides to go through before going to the second story on page one of the issue titled 'Cops killed First to hurt Slovo, daughter tells'. Monday's articles take this reader to issues relating to how Lesotho's internal problems began, how the SADC got involved, eventually leading the reader to articles going back two years ago. This reader is taken back to the political arena of Lesotho since 1996. It is up to the reader to decide whether to continue with this Lesotho history, or go back to page one and continue reading by going to the se cond news article.

The second reader 'B' gets into the same page of the *eM&G*, and after reading the Lesotho article, decides to go to the second story on that page, which is about the killing of First. At the end of this article, the background article takes the reader to the beginning of the South African struggle and the role of police were involved in killing the anti-apartheid people outside South Africa. These articles will take the second reader to discourses of the history of the South African struggle abroad and the role of the apartheid police in a smear campaign against innocent people. The enormity of the ingenuity of hypertext confounds the mind when one considers that as many as one hundred readers can access a certain issue of the *eM&G* at the same time. This issue may have about forty entry points, and each reader can choose the same or different entry points, but follow diverse paths. Each reader comes out with a different

overall 'text' of the news s/he consumed at that one seating. The experience and the 'text' may be different during the second seating. It is evident from the above that the path(s) that a reader chooses to follow in reading one issue of the *eM&G* does not only change the experience of reading, but also the nature of what is being read. Indeed, the nature of the 'story' that one reader comes out with is totally different from that of the other.

As Bolter (in Landow and Delany 1991: 111) indicates, it is true that the paths that the connections of hypertext organise make operational sense to the reader and author. Each topic may participate in several paths and its significance will depend upon which paths the reader has traveled in order to arrive at that topic. Each of these paths once gotten into, lead to other links that build on the topic, and so on. The paths develop into networks. This is why we say that in an electronic version, the texture of the text becomes thicker, and its paths can serve many functions. In print, only a few paths can be followed. Appreciating all this is a feature of critical reading. Because of the apparent exclusiveness of the reading environment created by hypertext, and because of the apparent neutrality of the associations it establishes, an awareness for critical reading needs to become a particular virtue of hyperreading (reading hypertextual material). Given such capabilities, reading in hypertext can provide readers with an enormous opportunity for discovery and synthesis. The reader born of this environment is thus a more critical and active one, as opposed to the more passive reader of the print newspaper. The former has the onus of deciding which nodes to open and paths to follow, generally making deliberate choices of what s/he wants to read.

A significant difference between reading text in the print version of the *M&G* and the hypertext *eM&G* is that most hypertext systems, though not all, allow readers to interact with the system to such an extent that some readers may become actively involved in the creation of an evolving hyperdocument. C o-authorship may take a number of different forms: brief annotations of or comments on existing material, creation of new links connecting material not previously linked, modification of existing material or the creation of new materials or both (Slatin in Delany and Landow, 1991: 159). In the case of the eM&G, other than choosing the path the reader wants to follow, s/he can in addition make comments on the news stories through the chat forum and e-mail. Adding to the actual article is not yet done in the *eM&G* . However, if this were possible, we would have a newspaper with no one reporter or author of news articles. This is because once an article is placed in the newspaper, many other readers can add to or subtract from it, eventually changing it quite substantially from the original article. At the end of the day, the article will be 'ownerless' or 'authorless' (Landow, 1997: 90-96). It is this state of affairs that has caused some theorists to celebrate the 'death of the author' (Landow, 1994: 39), a thought that is sending chills down the spines of literary theorists. This has implications for copyright issues which, as indicated in this study, are thorny and unclear in today's hypertext environment.

Hypertext's capacity for interactive reading therefore represents a radical departure from traditional relationships between readers and texts, and authors and readers. As Slatin (in Delany and Landow, 1991: 159) notes, the implications of this departure from traditional relationships between readers

and texts are enormous both for the creative arts and for education (and we can add media). This is because many theorists now agree that understanding comes about when the mind acts upon the material.

Some critics such as McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide.02.html and Keep, McLaughlin and Robin (1995: http://www.wmin. ac.uk/media/technowhore/theory/medhurst/ch2.html) have, however, perceived the nonlinear form of hypertexts and the possibilities that they embody as hindrances to a smooth reading experience. It can also be argued that the production of an online newspaper such as the *eM&G* influences the way the news will be read. As indicated in the previous section, the production of the *eM&G* via its layout and use of certain font sizes is done deliberately, with the intention of 'assisting' readers navigate through the various news nodes as effortlessly as possible. Let us see how the eM&G layout affects the reading of its news.

McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide.02.html) query the notion by pro-hypertext scholars such as Landow (1994, 1997) and Landow and Delany (1991) that hypertext frees the text and thus gives the reader more freedom to navigate within the text by determining her/his path of reading. They observe that there is an implicit hierarchy in the way links and certain other aspects of the layout of a hypertext document are set out. As such, when the author of a hypertext document presents many layers of 'exposed' sub-textual information, the movement of the reader although seemingly unrestricted and far freer can, in effect, be more restricted. Keep, McLaughlin and Robin (1995: http: //www.wmin.ac.uk/media/technowhore/theory/medhurst/ch2.html:2) also argue that link classes and node types for example, result in new centres and privileges.

In reading the *eM&G* of 28 September 1998 (Appendix 1, News, page 1) therefore, the main news story on the front page has a larger headline than that of the news briefs next to it. The larger headline depicts what article is deemed significant (by the editor) in terms of the weight of the information it holds, and therefore what he expects the reader to take as a priority. The larger headline also attracts the reader's attention so that s/he is subtly manipulated to read the stories in a certain way - by beginning with the main articles, which have larger headings.

With regard to the advertiser's symbol *M-Web Mall* , it is very prominent in that it is written in capital letters and imaged in a way a reader is 'forced' to notice it. First of all, it flashes on and off, thus attracting a reader's attention. Then it tells you: "shop from your desktop." This could be seen as a curious statement, raising a reader's interest to 'discover' what this is all about. This could be perceived as a way of forcing the reader to go to the advertiser's page before reading the news - the manipulation that Keep, McLaughlin and Robin (1995) and McHoul and Roe(1998: http://abbott.com.emr.ca/guide/guide.02.html)refer to. Knowing the way advertisers are aggressive, this could well be the case. In which event the concerns raised above about manipulating the reader in the way the editor chooses to layout his/her page are veritable. In view of this, the freedom that

Landow and Delany (1991) speak about is modified. However, according to the findings of this study, the extent of this manipulation is not significant enough to kill the reader's freedom to choose or create her/his reading path in the *eM&G* hypertext environment. This is because once inside the news articles themselves, the navigation tools are basic and minimal. This makes choices of paths to be followed by the reader less confusing. In the body of the news stories there are no flashing nodes for instance, and all news articles have the same font size for headings and the same fonts sizes for the body of the text. This uniformity creates a sense of 'a plain text', but at the same time, provides the balance necessary to allow a reader to read her/his news with a sense of minimum manipulation.

When a reader goes to the first page of the 'sports' section (Appendix 1, Sports, page 1) of any edition of the *eM&G* , s/he is drawn to the middle of the page. The word Sports is written in bold capital letters. The font size is the second largest on the page, after the title ZA*NOW . The sports articles' headings are in large font size, but not in capital letters, and they are bold. This layout thus draws the eyes of the reader to the lower section of the page, and a reader has a tendency to look at the news stories before looking at the list of various 'sports' stories lined up for that edition (which are written in tiny letters). This is the kind of subtle manipulation that McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide.02.html) see as inevitable, although not explicit, in a hypertext document.

This kind of 'nudging' the reader to enter the news at a certain point via the layout and use of font sizes is also evident in relation to the news sections of the five editions of the *eM&G* examined in this study. The presence of TODAY IN AFRICA (Appendix 1, News, page 1) in large bold capital letters kind of 'tempts' the reader to click here to see what is the news in the rest of Africa. The fact that the main news starts on the next page does not help the case either, because there is a whole space left blank after the words TODAY IN AFRICA. The news articles could have begun here like they have done on the sportssection (Appendix 1, Sports, page 1).

As indicated in the previous section, at the end of the three sections *news*, *sports*, and *business* of the five editions selected for this study, there follows a page with a summary of other sites one can visit while in the *eM&G* (Appendix 1, *News* , page 8; *Business*, page 6; and *Sports* , page 5). For instance, at the end of the *news* section, there is the option to go to either the *business* or *sports* sections, or to the } QUICK TOUR OF THE SITE presented at the bottom of the last *news* page and written in bold capital letters. The reader can decide whether to continue by going to the general information page, or go on to the *business* or *sports* sections. Making all these decisions can be daunting for a reader who is not sure what exactly s/he is looking for. If one is reading the news in a leisurely manner, this is not a problem. But a reader who wants a quick glimpse of what is in the news must be aware of what s/he wants and where to find it. Otherwise reading an online newspaper can be intimidating because of the large amount of information available to the reader. This is why the argument that a hypertext reader needs extra skills to consume the online news is logical.

It is also evident from the above observations that the act of coping with the

physical movement via a hardware system in effect diverts the thought pro cesses away from the unrestrained wanderings associated with printed matter. In the electronic document, making decisions on the choice of links to follow and the various diversions open to the reader as s/he navigates through the corpus of information p a ssing through her/his eyes can be quite bewildering and disheartening. The mass of information and the many possible paths a reader can follow might make a reader go 'off-course' thus taking much more time to read the news than was initially anticipated. T he reader may miss out reading the news altogether because s/he 'got lost' in the network, and ran out of time. This can be very frustrating and discouraging. In order to get the information s/he wants within the minimum time possible the reader therefore has to be a skilled browser. Hypertext documents have the potential to 'abduct' the reader. This may not be very positive in the long run if every time the reader gets into the system s/he does not achieve the initial aim - to read the news.

3.4 Implications for electronic newspapers: the case of the eM&G

Hypertext can be an enormously liberating innovation or a powerful system of ideological hegemony, according to Burbules (1996: http://www.ed.uiuc.edu/ facstaff/burbules/ncb/papers/crossroads.1.html: 10). However, he warns that the potential for manipulation and control built into any powerful technological system should not be overlooked when celebrating hypertext. When we consider that media have been used in the past to represent the views of their controllers and owners, it is not illogical to argue that designers of hypertext (and here it would be more relevant to talk about editors of online newspapers), could manipulate text to be read, hence understood in a certain way.

Burbules (1996: http://www.ed.uiuc.edu/facstaff/burbules/ncb/papers/ cross- roads.1.html: 16) posits that "if no system of organisation in hypertext is neutral, and if the heuristics incorporated into a hypertext always express implicit intellectual or moral priorities, then the question of who creates them, with whatever biases they might contain, becomes a crucial problem." Burbules cites Dale Spender (in Burbules, 1996: http://www.ed.uiuc.edu/facstaff/burbules/ncb / papers/crossroads.1.html: 10) who has suggested that women should be suspicious of a technology like hypertext which is so overwhelmingly controlled by men. She maintains that in a male controlled technological world, systems of knowledge will express the inevitable ideological limitations of the male perspective on questions of sexuality, gender relations, and so on. Indeed, a look at the editorial team of the *eM&G* shows that the majority are men. Its shareholders are also mainly male. It is no wonder then that the newspaper portrays a perspective of men in its articles and in the coverage of news, a notion that Spender articulates as mentioned above. This is very evident in the business and sports coverage in the *eM&G*, where in the sports section for instance, 98 percent of sports news is on male oriented sports - rugby, soccer, cricket, horse racing, and motor racing. If one reads only the *eM&G* sports news, one would come out thinking that South Africa has no sportswomen, let alone black sports people. However, matters of media, gender and race are beyond the scope of this

study. Spender's fear nevertheless is not baseless.

According to Burbules (1996: http://www.ed.uiuc.edu/facstaff/burbules/ncb/ papers/crossroads.1.html: 10), authorship (editorship in the *eM&G*), of hypertexts as well as other texts, raises questions of authority: who will constitute this class of knowledge producers/knowledge organisers? Burbules concedes that, "cataloguers, archivists, and others who construct hypertexts are not just compiling and organising a separately existing body of knowledge; they are acting as interpreters and makers of knowledge themselves." As such, Burbules (1996: http://www.ed.uiuc.edu/facstaff/burbules/ncb/papers/crossroads.1.html: 11) argues, they will control information (its organisation and dissemination) and access to it in ways that are potentially much less democratic and more restrictive and hegemonic than is now possible with simpler information systems.

The *eM&G* as hypertext has fundamental implications for how news is produced, presented, and received by readers as indicated in this study. The characteristics of hypertext identified in this study include: nonlinearity (Landow, 1994, 1997; Landow and Delany, 1991), decentring of text (Landow, 199 4 , 1997; Landow and Delany, 1991), creation of a plurivocal text with multiple narratives (Landow, 1994, 1997; Landow and Delany, 1991; Miles 1998), multiple pathways (Landow, 1997; Landow and Delany, 1991; Miles 1998), and giving marginalia voice or status within a document (Miles 1998). These elements of hypertext have impacted on the production and reading of online news, fundamentally changing the way in which these activities are carried out. This is because the reader of the *eM&G* is exposed to a much wider information market than the reader of the print version of the *M&G_*. The reader of the eM&G is not only confined to hard news, but to a myriad of other related and non-related information that a hypertext publication is capable of opening up through the network. The news is produced and read in a non-linear way. In addition, a text with these characteristics produces a new reading arena, calling for a new kind of reader: one who is active and critical.

As we have seen in this study, the act of reading news on a computer screen is not the same as reading the print version of the newspaper. Reading on a computer screen changes our speed of reading, when we pause, how long we concentrate, how often we skip over material or jump back and re-read what we have read before, and so forth. These differences in turn impact on the ways that we interpret, understand, and remember what we read (Burbules, 1996 (a): http://www.ed.uiuc.edu/facstaff/burbules/ncb/papers/rhetorics.html: 1). Reading hypertextually involves the reader making connections within and across texts, sometimes in ways that are structured by the author/editor, but often in ways determined by the reader. For example, as indicated in the previous section, two readers reading the Lesotho invasion news article will come up with two different stories. The way the two readers consume the news will definitely be different (since each chooses a different path), as well as the 'news article' with which each ends up. The reader of the *eM&G* therefore becomes the originator of the type of news s/he wants to read (consume) at the end of the day. The reader attains control of how s/he will

read the news by creating or choosing via links, the path s/he wants to pursue to read this news article. As a result, in rea ding the *eM&G* , the reader has more authority in negotiating and determining what s/he wants to read. The editor or author of the news no longer has the power to determine or direct, as in linear texts, the path the reader should follow.

This study has indicated that hypertexts provide a unique and non-linear method of accessing information. It is an information technology that has not only reshaped our lives by giving us new tools to work with, but also by reshaping our consciousness on a fundamental leve l . Hypertext has reshaped our consciousness because as a network it is fluid, ever-evolving, new paths forming, old paths disappearing. This means that the notion that a document is a complete, unique statement is no longer valid. As such, hypertext is not only reshaping the way we read and write, the roles of a reader and author of texts, but also redefining texts. In view of this, this study therefore sees hypertext as tending towards increased dissemination of information, increased democratisation, and decentralisation of power.

With reference to the eM&G , what does increased dissemination of information, increased democratisation, and decentralisation of power entail? On the first page of all the five editions of the *eM&G* (Appendix 3) selected for this study, there are entry points. Thirty eight options mean a lot of ways in which any of the many readers of the *eM&G* can choose to 'enter' the online news. This also means exposure to a large bulk of information. In addition, the fact that the reader decides what to do with all this information without being directed to move from page one to the end of the newspaper as is the case with the print version means democratisation of the text (news) and the reader. Some power is decentralised from the editor or writer of the news to the reader who now makes decisions on how to actually read the online news. In other words, the online news readers are empowered, according to Landow (1997: 273), "ones who have more power relative both to the texts they read and the authors of these texts than readers of print materials have." The power of the text is also decentralised because any one entry point is as valid as any other - the index, for instance, or a 'footnote' (related news article) are as authentic points of entry into the as a main story or main node such as 'news', 'business' or 'sports'.

Landow (1994: 69) identifies the main feature in hypertext as discontinuity, which is achieved through the link. The link is what allows the nonlinear organisation and access of text in hypertext (Landow, 1997: 64). Thus through linking, a text is embedded in another text. It is the link therefore that enables the reader to navigate from one text to another (Landow, 1997: 11), creating her/his path in the network that is the news. If we take the first page of the *eM&G* of 28 September 1998 (Appendix 1, *News,* page 1) as already pointed out, there are possible entry points. If a reader selects to read the *news* section first, this means that s/he can either start with the first news article or the second, third or the last one. There are **eight** articles under 'news' and **nine** articles under the *specials* section of the *news* .

Let us assume that the reader clicks on the first article titled "*Troops will stay in Lesotho - SADC*" . The article opens, and the reader finds after the story, there is **one** link titled *Monday's earlier reports* . Below this, there are **seven**

related articles to this main story. The reader has **eight** related articles that s/he must decide either to read before going on, or to bypass and go on to the second news article.

To the right of the main news article is a Late Flashes story headed "*NP'S Marais Supports Boesak."* Below this article, there are **four** Background articles, one of them dated June 15 1995. Another one provides Background links to Alan Boesak, which means many more articles on how and when his case began. From only two articles, the reader is exposed to many more articles than s/he can go through in the 'news' section of the *eM&G's* issue of 28 September 1998. The reader is thus provided with much more information than is possible in the print newspaper.

Each of the **nine** articles under *news* in appendix 1 has some links: two articles have **two** links each, four have **three** links each, one has **ten** links, another has **eight,** and yet another, **seven** . For news only, the reader has a total of **41** articles to read. If the *news flashes* articles (28 of them) are included, the articles come to **69** in total. After this section, there is another section still under *news*, titled *Today's Features* with **eight** articles. What we are talking of here is a very large volume of information that is available to the reader. And we must bear in mind that this is only the *news* section of the paper, the *business* and *sports* sections have their stories too. No print version of a newspaper would be able to provide all this information within the confines of print pages as we know them today.

What makes this news scenario even more powerful and democratising is the fact that this is information anyone with a computer can freely access. There is no censoring, and even issues of copyright are not clear-cut yet. As such, this information can be taken and used in more ways than there are readers of the *eM&G* . If the eM&G was an advanced hypertext, thus allowing for comments and annotations to be added to or subtracted from the articles, the democratisation of the text that is the eM&G would be consummated.

To illustrate the differences in the way a news item is presented in print and electronic newspapers, and how the news item changes and changes the manner of reading it, I selected for this study the news article on "*Renaissance*" . In the *eM&G* issue of 28 September 1998 the article is headed "*No renaissance without democracy - Mbeki*" (Appendix 1, News, page 5). The article is only three paragraphs in length. But then after the news article, there are **ten** related articles - **nine** as background and **one** previous ZA*NOW report. In the *M&G* (October 2 to 8 1998: 13) the story is headed "Renaissance Incorporated"

(Appendix 2). The article takes slightly less than three-quarters of page 13 of the *news* section of the print newspaper. Included are photographs of what the newspaper calls "The Deputy president's men."Thabo Mbeki, who is in the photo graphs is said to have "handpicked University of the Witwatersrand academic Malegapuru Makgoba and publisher Thami Mazwai to act as a [sic] midwives for Africa's rebirth." The story in the *M&G* weaves the historical background of African renaissance with current South African thinking and efforts to renew the notion of 'African renaissance'. It shows how the current South African situation will be incorporated in Deputy President Mbeki's

ambition to make South Africa "an economic and intellectual centre like Timbuktu," a 14 th 16th Century world-leading Islamic centre of learning. The idea is being applied to the renewal and reawakening in all facets of life in South Africa - economic, social ("moral renewal" and eradication of poverty), and industry. All this is presented on less than three-quarters of one page of the *M&G*.

On the other hand, the *eM&G* article on 'Renaissance' does not have any visuals. Indeed, none of the articles in the five issues chosen for this study had photographs. This makes the news pages where the renaissance story is covered in the *eM&G* very plain and more boring to read compared to the print version of the news article

In terms of news volume, it is evident that the *eM&G* has much more to offer because if one printed out the **ten** background articles, one could come up with many more pages of information related to the renaissance article. This option of tagging related/background articles to main stories probably influences the way online articles written briefly - as if they were written inadvertently. The article has no clear paragraphs, and it reads like a summary of news on radio or television. This size is quite unsatisfactory for an article that is supposed to stand on its own, but the previous ZA*NOW report compensates for this shortcoming. Since we argue that each link can stand on its own as a chunk of complete news, this brief presentation of a news item should be avoided in online newspapers. It is not complete as it stands, unless a reader goes to the previous report. An article should be complete in itself if the logic of a link being a self-contained entity in hypertext is to make sense. This calls for online journalists writing for the *eM&G* to consider revisiting how they write their online articles.

In view of the enormous amount of information available to the reader, reading hypertext such as the *eM&G* is essentially a different experience from reading print material. This is because, as we have seen above, when a reader opens the 'front' page of an issue of the eM&G, s/he "cannot read it all, and when reading it, [s/he] cannot see the whole text" (Landow, 1994: 64). According to Landow, this makes the reader self-conscious about how to read the news; a self-consciousness that forces the reader to take responsibility for what s/he reads and to accept that it can never be the complete text. As such, one cannot talk of 'finishing' reading the *eM&G* because one cannot read through it the way one can read a print version of the *M&G* from page one to the end. In hypertext, the reader gets tired and decides to exit the text. S/he never can finish reading the *eM&G.*

In the *eM&G*, the virtual image of its text is produced and read on a computer screen. Behind this screen exists an unbounded field of other texts - what Landow and Delany (1991: 38) call "Barthesian networks." When positioned at the news section (*News*, page 1) of page one of the September 28 1998 issue of the eM&G (Appendix 1), some links are visible but many more that are attached to these visible ones are behind the screen. For example, the Lesotho/SADC story is visible, while only the titles of its eight related articles are visible. The news stories and those of the articles related to these news stories are not visible. So at no time can all the links available be visible to the reader. It is up to the reader to use her/his browsing skills to access the

relevant information s/he is interested in without either getting disoriented or experiencing cognitive overhead.

This takes us to the issue of what kind of reader the eM&G is aiming. Critics of hypertext such as McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide. 02.html) have argued that hypertext readers are a very select group by virtue of the equipment required to access hypertext documents. It is expensive to buy, to use, and maintain. The equipment includes a reasonably powerful personal computer (PC), connection software to a local mainframe and means of access to that mainframe, modem, and institutional rights which usually come with members hip, to, say, a university community.

In addition, McHoul and Roe (1998: http://abbott.com.emr.ca/guide/guide.02. html) point out that potential readers of hypertext need to be skilled in file transfer routines and in hypertext manipulations themselves. A reader therefore needs to have some computer skills to read an online newspaper. Consideration of the type of texts delivered in hypertext and who controls them raises issues of cost. For instance, hypertext authoring programs such as Authorware Professional, Macromedia Director and Toolbook, to name a few, do not come cheaply. They not only require even more powerful machines than those required merely to read, but also institutional sanctions which allow writer's to 'post' their texts on mainframes, or else, industrial links to CD-ROM manufactures for distribution. This effectively limits hypertext genres either to pro-institutional texts (so that many of the first forms available via WWW were in effect advertisements for universities and museums) or to texts which might be perceived as having a market (games, encyclopaedias, movie guides, and so on). In view of the above issues, McHoul and Roe assert that hypertext technologies appear, in terms of their propensities for free composition and distribution , more limited than conventional print technologies.

One of the criticisms of having to read news online is that the online reader must actually go to a desktop computer to be able to access the news article. One cannot read it while lounging on a settee o r a bed. This is true, but one should consider that a serious reader who is not about to doze over her/his news reading session would be better off seated than lying down as s/he reads the news. However, new efficient technology is improving the reading environment, making it more convenient and friendly for the reader.

For the eM&G, being online means "making savings, adding value to the editorial product, and connecting to new markets" (Berger, 1997:http://journ.ru.ac.za/staff/berger-misait.html : 12). Savings are made in so far as 'dispatching' the newspaper is no longer done via roads but through the information superhighway. This cuts down on funds needed to employ drivers, newspaper vendors, carry out mechanical repairs for cars and trucks, buy fuel and replace damaged newspapers. In addition, getting story material online via e-mail is faster and cheaper (as opposed to expensive and time-wasting telephone calls). It saves staff quality time to do justice to local stories, by helping to fill the news-hole with the best of global reports that can be republished, to mention just a few advantages. The ability to search newspaper archives around the world for articles further enriches this new

vibrant publishing environment (Berger, 1997: http://journ.ru.ac.za/staff/berger-misait.html 12).

According to Berger (1997: http://journ.ru.ac.za/staff/berger-misait.html:9) , these developments have implications for journalists' working environments and work-practices, (one can add - for readers too) - such as re-skilling, multi-skilling, copyright, heightened competition in an environment that is becoming information-overloaded, ethics, interactivity with audiences, and so on. The issue of training for both journalists and readers is crucial. As pointed out in the study, accessing the online newspaper requires skills in computer handling knowledge. It also requires a reader who can browse and get the information they need without getting disoriented or succumb to cognitive overhead. This means that only a certain percentage of the population can afford a computer and have skills to access the online newspaper. This restricts the number of readers who can benefit from online newspapers.

Being an exploratory hypertext, the eM&G is useful for finding information. The path(s) that the reader follows is (are) explicitly determined by the newspaper editor and the reader cannot create new links or forge new paths through the text being read. In this sense, as an exploratory hypertext the eM&G reproduces the hierarchical power structure (author over reader) promoted by traditional print literacy while at the same time undermining the constraints of linearity found in traditional print literacy (Eyman, 1995: http://localsonly.wilmington.net/~eymand/ fintro.html:1). As shown in this study, although the eM&G is not yet a constructive hypertext, it offers much more in terms of interactivity and active readership to its consumers than the print version. It offers a new and more enriched kind of text (news), in addition to more information, than a print newspaper can ever offer. Indeed, it has not only provided a new reading arena, new text, new reading skills, but it has also introduced new production and reading processes that an online news reader is called upon to adopt. This adaptation empowers and ameliorates the reader by providing a more powerful and improved news text than that provided by the print media.

SECTION FOUR

4. GENERAL CONCLUSIONS

The main aim of carrying out this study was to investigate the production and reading processes of the eM&G as an online newspaper. The question of how the online newspaper differs from the print version, and what impact the existence of the online version has made on news presentation and reception (reading) was examined. Indeed, what effect a hypertext newspaper has on the dissemination of information in terms of who disseminates information, to whom, through what means, and how this information is received, was the gist of the study.

The study also examined the question of whether hypertextuality produces a different kind of text from the print version, therefore offering a different kind

of article. In view of this, the issues of whether the reader of an online newspaper needs additional skills to read it, whether the same volume and kind of news is offered, indeed, whether the reader maintains the same reading process or a new one is essential, were interrogated.

The project therefore included:

a. Perusing one week's issues of the eM&G and looking at the news production process. This entails examining how the news is laid out hypertextually; who disseminates information; to whom; through what means; and how this information is received.
b. Investigating the reading process that emanates from a hypertext format of news presentation. This involves investigating how the reader reads online news; what volume of news is received; what kind of news is offered; and whether the reader sustains the same reading process as that of reading the print version of news, or a new one is called for.
c. Examining the role of the reader in a hypertext news-reading environment and the implications of the eM&G (as hypertext) to information dissemination.

This study has attempted to show the great possibilities inherent in an online newspaper such as the eM&G. Online publishing using digital technology has opened up hitherto unimagined possibilities for the publishing world. Reading newspapers on the computer screen and linking them to radio, television and video are new possibilities that technology has opened up. Very soon we may have our newspapers delivered to us on our personal computers (PCs). Probably online newspapers will develop into constructive hypertexts, enabling readers to annotate, add to and/or delete news articles, thus creating metadocuments of news. In such a liberating news environment, it will be interesting to find out how a news article develops and changes as it is added to and subtracted from. Indeed, issues of copyright regarding whose news article such a one will belong to provide interesting areas of investigation.

Online publishing has heralded a veritable revolution within the news media, with implications for the production, dissemination and reading of news. There can be no looking back for online newspapers such as the eM&G and 24.com. The challenge for the eM&G now is to open up greater interactivity for the reader so that the full potential of an advanced hypertext environment - complete with audio, video and animations - is realised.

The eM&G issues selected for this study had no images. This limits the visual richness that images provide in any news arena. As such, reading the print version of the M&G is more reader-friendly because pictures enhance the stories of newspapeps. The formidable task of eM&G is therefore to invest more in order to fully integrate the power of being hypertextual, thus giving the reader a richer reading environment. Today, many print newspapers are not only extending to online publishing but also making ventures in audio and video. This is a challenge the eM&G has to contend with if it has to remain

competitive and maintain its position at the cutting edge of online publishing.

It is a fact that hypertext has significantly changed our notions of producing and reading in general. Indeed, as Burbules (1996: http://www.ed.uiuc.edu/fac staff/burbules/ncb/papers/crossroads.1.html :1) asserts, hypertexts provide an interactive relation between the structure of a text and the strategies of reading it invites. They also facilitate reading strategies in which the reader is making connections laterally, beyond the text, as well as linearly, within it. Discussion of hypertext thus raises questions about the nature of reading texts of any sort. As discussed in this study, reading hypertextually not only requires acquiring new reading skills, but also access to a computer. In a Third World setting, the availability of facilities to make use of these new ways of reading online newspapers is further hampered by lack of electricity and telephone lines. In South Africa for example, the majority of the population live in rural areas where such facilities are non-existent. In addition, the level of literacy is so low that even if these facilities were available, they may be underutilised. The need for creating relevant educational opportunities to cater for the large uneducated populace in South Africa cannot be over emphasised.

The expense and sophistication of hypertext systems and of the technology needed to run them, raises questions for democracy as well. To echo Burbules (1996: http://www.ed.uiuc.edu/facstaff/burbules/ncb/papers/crossroads.1.html :11), "will citizens be able to access these information sources through publicly subsidised media, or will they be available only with subscription price or other payment?" Asking people to pay for services that they may consider not useful in their daily lives may be unrealistic. After all, the habit of having a print newspaper I think is more 'real' to a lot of rural and some urban dwellers. Burbules further questions whether there will be a similar public commitment to providing access to hypertexts (similar to the one that led to the establishment of public libraries, for example). If reading via a computer becomes the way to do things in the future, will governments provide equal access to such resources, and the vastly enlarged learning opportunities they represent? Which South Africans, for instance, will have access to such materials from their homes, and which ones will not? Unless the government intervenes, the possibilities that new technologies are heralding will not be enjoyed by a large segment of the Third World population, at least not in the near future. Hopefully as time goes on, communities will get together and create communal access points to cater for their children. This will help open technological opportunities to more people in the society.

As a result of this study, several areas emerged that could make interesting topics for further investigation. Currently, only a few people have access to hypertexts. As such, ways of making facilities more available, and creation of hypertext systems that are user-friendly, should be investigated. Simpler navigation tools for online newspapers need to be designed to enable people to surf an online newspaper with minimum problems. Indeed, the question of the role of links and nodes in influencing the eM&G readers' choice of reading paths, and the issue of link and node labeling and how they impinge on the issue of predictability are other veritable areas of future research.

Another area of investigation is that concerning the question of whether journalists have changed their way of writing in online newspapers and the implications of this to clarity, consistency and complete news articles.

Finally, the issue of what an unmoderated news article could mean for the online newspaper is another area that would make fascinating research. Such an investigation would involve finding out what an unmoderated news article would look like and how the original article eventually develops and changes with such development. An intriguing fact to find out would be: whose article is this going to belong to? Who will be its author? In an ideal hypertext environment where readers can annotate and add to texts, it is difficult to say who for sure wrote/authored such an article. This raises the issue of copyright, which I believe in an advanced hypertext eM&G could become another appealing area of investigation.

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