# New Media English Literature:
# A Product Re-Launch

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## ABSTRACT

In the recent past, the large-scale production and marketing of e-reading devices, such as Amazon's Kindle, and tablet computers, such as Apple's iPad, have allowed literary works to be presented in a digital reading space, both in the form of standard e-books and, more recently, as enhanced or "amplified" e-books. Much of the position-taking on the matter is polarised: technologists continue to imagine the myriad possibilities of multimodal online "stories", focusing on opportunities for interactive engagement, while the guardians of literary tradition fear the digital reading space might well cause fluency disruptions and break the hermeneutic immersion necessary for strong reading, irrevocably altering a traditional, paper-based reading experience known to promote a state of deep attention and imaginatively engaged reading. This thesis looks realistically at the current literary climate in which the so-called "digital native" operates, scrutinises the "print" versus "electronic" debate, paying careful attention to how an online environment may well prevent hermeneutic immersion, and then discusses recent enhanced literary products, such as the transmedia fiction title, *Chopsticks* (Penguin Group USA 2012), and the nonfiction titles released by online publisher Atavist. Then, in an attempt to bridge the gap between the technologists and the print-book purists, and based on what might be considered to be literature's original value, the thesis proposes a digital reading product in which a formalised set of conventions and a strategic instructional design, or interface, attempts to protect the qualities of traditional, paper-based reading, while at the same time taking advantage of on-screen, online environments to reconnect digital natives with the relevance of past literatures. More specifically, the product presented herein is an attempt to demonstrate 1) how a new aesthetic of literary presentation might stimulate renewed interest in the humanities and liberal arts; 2) how fiction might be reinstated as one of the central components in the education process; 3) how works of fiction that have become increasingly obscure over time or inaccessible to young people might be re-energised; and 4) how what one might call "local" literatures might be "de-parochialised" within an increasingly globalised reading environment.

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# OPSOMMING

Die produksie en bemarking op groot skaal van e-lesers soos Amazon se Kindle en tabletvormige rekenaars soos Apple se iPad het dit moontlik gemaak om letterkunde in ’n digitale ruimte aan te bied, hetsy in die vorm van e-boeke, of (meer onlangs) in versterkte en “aangevulde” e-boek vorm. Meningsvorming rondom die letterkundige toepaslikheid van e-boeke is sterk gepolariseerd: tegnoloë sien net die magdom moontlikhede raak wat multi-modale aanlyn stories en interaktiewe betrokkenheid inhou, terwyl tradisionele literêre kurators vrese koester oor hoe die digitale leesruimte inbreuk sal maak op die vloei en hermeneutiese onderdompeling nodig vir ’n grondige leeservaring; dit, meen hulle, sal dan ook lei tot die onherroeplike verlies van diep en verbeeldingryke aandag, eienskappe wat lees op papier veronderstel is om mee te bring. Hierdie proefskrif werp ’n realistiese blik op die huidige literêre klimaat, veral die omstandighede waarin die sogenaamde “digital native” deesdae funksioneer. Die debat rondom gedrukte teenoor elektroniese boeke word noukeurig ondersoek, veral met betrekking tot die mate waarin aanlyn lees dalk wel hermeneutiese onderdompeling onderdruk. Verder word versterkte literêre produkte soos die transmedia fiksie titel, *Chopsticks* (Penguin Group USA 2012), en nie-fiksie titels deur aanlyn-uitgewer Atavist, noukeurig bekyk. Voorts, in ’n poging om die gaping tussen tegnoloë en gedrukte-boek puriste te oorbrug, en op grond van wat mens die oer-waarde van letterkunde dalk kan noem, stel hierdie proefskrif ’n digitale leesproduk voor met ’n geformaliseerde stel konvensies en ’n strategiese instruksionele ontwerp, of koppelvlak (‘interface’). Dit word gedoen in ’n poging om die eienskappe van tradisionele, ‘papier’ lees te behou, maar terselfdetyd voordeel te trek uit die aanlyn-omgewing, en om sodoende die ‘digitale inboorling’ te herenig met die relevansie van vervloë letterkunde. Hierdie voorgestelde produk, dan, is meer spesifiek ’n poging om te wys 1) hoe ’n nuwe literêr-digitale aanbiedingsestetika hernieude belangstelling in die geesteswetenskappe en liberale kunste kan werk; 2) hoe fiksie weer ingestel kan word as kern-komponent in die opvoedingsproses; 3) hoe nuwe energie verleen kan word aan fiksie wat toenemend onbekend of ontoeganklik vir jongmense word; en 4) hoe die Suid-Afrikaanse letterkunde opgehef kan word binne die opset van ’n toenemend-globale leesomgewing.

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# CHAPTER ONE: INTRODUCTION

## Enhancing Literature with a Purpose

Soon after beginning my research for this thesis, I approached, via a senior academic at Stellenbosch University, a prominent contemporary South African writer, Zoë Wicomb, to gauge her willingness to work with me on a digital repackaging of her collection of short stories, *You Can't Get Lost in Cape Town* (1987). The intention, if Wicomb had obliged, was to demonstrate how a specific kind of literary work might be digitalised and "amplified" so as to increase readership and engagement with a new generation of individuals – people who do most of their reading in the digital space, using personal computers, mobile phones and now, e-reading devices and tablet computers. The term "amplified" was coined by publishing giant Penguin Group and refers to e-books that are enhanced to "provide deeper, richer insight into an author's work" (Penguin.com 2012). In other words, on an e-reading device, such as Amazon's Kindle, or on a tablet, like the Apple iPad, a digital version of a text is supplemented with media – audio clips, timelines, maps, contextual links and so on, all of which can be accessed by the reader as he or she reads the primary text.

To the printed book purist, though, the enhanced or "amplified" e-book represents the second assault on traditional, paper-based reading. The first such assault came in the form of the technology itself. Whether the device was an e-reader, tablet, personal computer or mobile phone, book purists argued that e-books would not succeed because they lacked a specific kind of tactile interaction. Journalists, even technology journalists such as Mike Elgan – former editor of Windows Magazine – suggested that the timeless technology of the codex book, such as its flexibility, its independence from electricity, its ability to be easily annotated, as well as its hardiness on a beach or in a bath, would sooner or later demonstrate that e-readers sullied the joy of reading (2007). In fact, over the last two years there have been no shortage of "odes to the book" by online journalists, my favourite being that of luddite Ron Grossman of the *Chicago Tribune News* who listed "the mildew perfume of moldy bindings" as an experience with which like-minded bibliophiles would identify – and which they would continue to relish (2011, n.p.).

The publishing industry, together with its authors, has also been mulish in its response to the digital reading space. In his capacity as the senior director of online consumer sales and marketing for Penguin Group USA, Jeff Gomez etched out a nonpartisan position for his

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company as far back as 2008, criticising major trade publishing for "slowly hardening into hubris" by thinking that "any challenge to the way it does business is an attack of philistinism rather than an idea whose time might have come" (2008, p.62). By 2012, the hubris referred to by Gomez was thawing quickly, yet it was only in March 2012 that the author of the bestselling book series in publishing history, JK Rowling, allowed the release of her *Harry Potter* series in digital format – and there are still many authors who are vehemently against the idea. The late Ray Bradbury, one of the most lauded science-fiction writers of the twentieth century and author of *Fahrenheit 451* (1976 [1953]), was quoted as follows in 2009:

> Yahoo called me eight weeks ago. They wanted to put a book of mine on Yahoo! You know what I told them? "To hell with you. To hell with you and to hell with the Internet. It's distracting. It's meaningless; it's not real. It's in the air somewhere." (Steinhauer 2009, n.p.)

Doris Lessing (whose literary work will be discussed in detail in Chapter Six of this thesis) is a recent Nobel Laureate who has expressed similar sentiments. In her Nobel Prize acceptance speech, Lessing made the clear-sighted observation that

> [w]e never thought to ask how will our lives, our way of thinking, be changed by the internet, which has seduced a whole generation with its inanities so that even quite reasonable people will confess that, once they are hooked, it is hard to cut free … (2007, n.p.)

For book purists, the dissolution of codex technology is unthinkable, but so is the idea that a text should exist on a networked screen, with all the screen's inanities, and, according to many more people than just Ray Bradbury, its distractions. Terje Hillesund, media and communication theorist at the University of Stavanger in Norway, summarises this fear neatly:

> While hypertext theorists celebrate a new-won freedom for readers (and writers), others claim that the current shaping of the Web induces a new form of constraint – a psychological urge to click; a kind of uneasy wariness of mind and index finger. (2010, n.p.)

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For me to suggest a digital version of her collection of short stories to Wicomb was bad enough, but the further suggestion that her book would be digitally "enhanced" with the inclusion of contextual "amplification" led to an unambiguous response: she found the idea "absolutely horrifying".[1]

It is not difficult to guess what Wicomb might have imagined happening to her book in such a project. She may have come across or heard about application software ("apps" or "app") in which the purpose is to enhance children's fiction. *Alice for iPad* (Atomic Antelope 2010) is one example: children can read Lewis Carroll's classic text and, at the same time, interact with the story in on-screen experiences of throwing tarts at the Queen of Hearts, tossing mushrooms around a room by twisting the tablet screen in their hands, or tilting the device to make Alice grow as big as a house. It is more likely, though, that Wicomb may – if anything – have viewed or heard about enhanced nonfiction titles, such as former US presidential candidate Al Gore's environmental sustainability app, *Our Choice: A Plan to Solve the Climate Crisis* (Push Pop Press 2011a) or any one of the titles released by digital publishing house Touch Press, such as *The Elements* (2011).

Popular sentiment, evident in the successful marketing of the abovementioned products, suggests that children's fiction and nonfiction are seen as easier to assimilate into the digital reading space without having to negotiate the imaginary *sustained* reading space of adult fiction. In addition, publishing heavyweights are confident that there is a future for enhanced e-books in education (Jones 2011). That is not to say that digital publishers are not tentatively nudging adult fiction closer to the enhanced digital reading space. A recent example includes an enhanced version of Jack Kerouac's classic novel, *On the Road* (1951). The app is called *Jack Kerouac's On the Road* (Penguin Group USA 2011) and its features include "never-before-seen" material such as audio clips of Kerouac reading excerpts from an early draft as well as documentary footage of fellow "Beat Generation" peers sharing their impressions of Kerouac. Readers will also find an introduction by Beat scholar Howard Cunnel, together with articles by Kerouac himself on his unique writing style. More interactive features include a map of Kerouac's famous 1947, 1949 and 1950 road trips and several photo galleries. *Jack Kerouac's On the Road* is a relatively benign enhanced fiction and it seems

[1] As reported to me by Leon de Kock, my thesis supervisor, who put the idea to Wicomb on my behalf.

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almost disingenuous to call it “amplified”. It represents, though, what some might call a conservative example of how online tools and media can be used to create a hypermedia environment in which a literary fiction’s “paratext” (Genette 1997) might function.

A less conservative approach is the young-adult fiction app, *Chopsticks*, in which a love story unfolds using hardly any text at all: photos, letters, YouTube videos, music and even instant messaging (IM) tell the story (Penguin Group USA 2012). This is an active reading experience, where the reader is extensively tasked with uncovering the story using a variety of senses and multimodal media platforms. Some of the features listed on the distributor’s webpage tell the reader that he or she will be able to “touch the music notes to discover interactive features”, click on “important news clippings and articles” and watch as “IM conversations slide down the screen” (Apple Online Store 2012a). If *Jack Kerouac’s On the Road* is hypermedia, then *Chopsticks* is transmedia. In the former, satellite media supplement an understanding of the primary text, and in the latter, media *becomes* the primary text. Indeed, had Wicomb, perchance, happened upon *Chopsticks*, I have no doubt that some of her questions and concerns might have been uncannily similar to the curtain-raiser questions proposed by electronic literature theorist, Katherine Hayles, in the introduction to her book, *Electronic Literature*:

> Is electronic literature really literature at all? Will the dissemination mechanisms of the internet and the Web, by opening publication to everyone, result in a flood of worthless drivel? Is literary quality possible in a digital age or is electronic literature demonstrably inferior to the print canon? (2008, p.2)

It might be argued that, prior to the last three years (in which there has been unprecedented growth in the digital reading space), book purists had little to worry about: there was no great danger – for example – of a student approaching Bradbury, Wicomb or Lessing with the intention of digitalising, and then “amplifying” their texts. Perhaps more importantly, there was little, if any, demand for such a product. That is not to say that electronic literature did not exist long before *Chopsticks* and *Jack Kerouac’s On the Road.* Two names that dominate introductions to the nascent forms of electronic literature are Michael Joyce and Stuart Moulthrop, best known for using their Storyspace program in the 1980s to produce what is referred to as hypertext fiction: on-screen literary fictions that present the reader with a number of alternate routes through a story by way of clicking on lexical elements, or

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hyperlinked words and phrases (Alexander 2011, p.18). Unlike traditional, paper-based reading, there is no single, linear and continuous direction to follow in a hypertext story. The experience is best summarised by author of *The New Digital Storytelling: Creating Narratives with New Media*, Bryan Alexander, who says that reading a hypertext is "something like a hybrid of exploring a space (think: museum, park, city), solving puzzles (which path will be productive?) and reading an opera libretto or closet drama (staging it mentally)" (2011, p.18). It would be amiss not to mention interactive fiction (IF) at this stage: not so different from hypertext fiction, IF is an electronic text that combines "game play with novelistic components" (Hayles 2008, p.9). IF dates back to the 1970s where multi-user domains (MUDs) allowed multiple players to interact in a virtual space which was usually text-based (Alexander 2011, p.19). Like the more recent *Chopsticks,* both hypertext and interactive fiction "provided an unusually user-centred experience, requiring readers to choose their own pathways through, to contribute, to interact in a basic, if not radical, sense" (Alexander 2011, p.19), but almost all of the electronic literature prior to the twenty-first century failed to reach the mass market, and it certainly did not pose any threat to print-dominated major trade publishing. Publishers simply had no interest in getting involved with electronic titles.

Fast-forward to 2012, and the picture is very different. Apart from the exceptional number of boutique digital publishing houses that have been launched in the last 24 months, including Open Road Integrated Media Inc., Coliloquy, Atavist Inc., Citia, Byliner Inc., and Moonbot Studios, publishing behemoth Penguin Group plans to release 50 enhanced e-books in 2012, slightly behind the estimates of Simon and Schuster's 60 (Alter 2012). Based on the figures, this newfound focus on "digital" and "enhanced" is hardly surprising: as a reflection of their own financial report, in which e-books came in at just 10% less than trade print sales, UK publisher Bloomsbury called 2011 the "year of the e-book" (Meadows 2011) and NPD Group reports that in 2011, tablet and e-reader sales reached $15 billion in North America, doubling 2010's figure (2012). What's more, according to "The rise of e-reading" recently published by the Pew Internet and American Life Project, "[o]ne-fifth of American adults (21%) report that they have read an e-book in the past year" (2012, p.3).

Technology giants Amazon and Apple are largely responsible for the surge in the sales of e-books and e-book reading devices: many will attribute to these two companies and their technologies the arrival on the mass market of e-books, enhanced e-books and more

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comfortable on-screen reading experiences in general. Amazon's "Kindle" is an e-reading device which was released in 2007 and addresses many early concerns about e-books: the battery lasts for up to 30 days; it has an anti-glare screen as well as an e-ink display; users have access to an extensive range of e-books in the Amazon online bookstore; and such e-books are priced far more competitively than those on sale as part of the first wave of e-book devices which became available in the early 2000s (Hillesund 2010, n.p.). On Apple's iPad tablet computer, users are also able to read e-books, but the device's functionality is more sophisticated than the monochrome e-reader; while still being lightweight and slim with a large screen area, the iPad remains a colour-screen computer capable of performing any function that one would perform on a laptop computer. Apple iPad users can connect to the internet, as well as access hypermedia such as video, interactive features, photo galleries and external links. In short, the technology of the tablet – as well as its expeditious dissemination in first-world markets – is allowing publishing houses like Penguin Group the opportunity to produce multimodal media titles such as *Jack Kerouac's On the Road* and *Chopsticks*.

After reading Chapter Two of this thesis, which discusses the overall decline in literary reading in North America, some readers might come to the conclusion that digital reading technologies like e-readers and tablets – by necessitating active engagement between reader and text – might help to improve reading rates, certainly in the segment of the population born after 1980 and accustomed to interactive digital environments (computer games, social networks or search engines, etc.). Studies exist that appear to prop up this assumption; for example a recent study has shown that 41% of tablet owners and 35% of e-reader owners say they are reading more since the advent of e-content (Pew Internet and American Life Project 2012, p.4). Another study emphasised in its conclusion that

> given that appeal is an essential building block for early literacy development, enhanced e-books may be valued for their ability to prompt less motivated young readers toward engagement when they might otherwise avoid text altogether. (Chiong, Ree and Takeuchi 2012, p.2)

Lastly, in a separate study, led by Eliza Dresang, an American professor of Library Science specialising in changes in children's literature as a result of the digitalisation of text, the authors suggest that young people are "developing a tolerance for open-endedness and ambiguity" (Dresang and McClelland 1999, p.162). It is highly likely that young people's

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inclination towards using the digital space comes from their having grown up with the internet:

> They are interactively and freely organizing information and making their own connections, not from left to right, not from beginning to end, not in the traditional straight line, but in any order they choose. (Dresang and McClelland 1999, p.162)

However, before any overly optimistic conclusions are drawn, a number of concerns about the limitations of the digital reading space require careful examination (this thesis discusses many of these concerns in detail in Chapter Three). A group of academics, including the aforementioned electronic literature theorist, Katherine Hayles, as well as technology writer Nicholas Carr and American literary critic Sven Birkerts, are skeptical about the ability of the digital reading space to promote qualities inherent in traditional, paper-based reading.

For instance – and here is where the "hear, hear" of the book purists murmurs in the background – Carr and Hayles both refer to the probable neuro-cognitive changes taking place as humans spend more of their time in the digital reading space (Hayles 2007; Carr 2010). Carr, in particular, discusses changes to human neural circuitry whereby internet reading skills such as scanning, and performing several tasks at once, are seen as overriding cognitive space previously reserved for thinking deeply (2010, p.140). Hayles refers to this as deep attention, promoted by the quiet, linear act of traditional, paper-based reading, versus hyper-attention, which is a state of distractedness promoted by the frenzied inter-connectedness and discontinuity of the Web (2007, p.188). As much as Hayles attempts to differentiate her concept of hyper-attention from Attention Deficit Hyperactivity Disorder (ADHD) (see Chapter Two), it cannot help but sound like something for which a person might need treatment, and I am sure Doris Lessing would add a "told you so" when she learnt that the Diagnostic and Statistical Manual of Mental Disorders (DSM), widely viewed as the authority on mental illnesses, plans next year to include "Internet use disorder" in its appendix (Richtel 2012).

Carr's large-scale literature review suggests that learning or engaging with a text in a digital environment draws heavily on problem-solving and decision-making abilities to the detriment of language, memory and visual processing skills (2010, p.122). Essentially, one of paper's spatial limitations is its isolation; there are no other options for the reader but to read the text

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linearly, and the advantage is the brain's ability to focus on effective comprehension within a closed environment. Online, humans are operating in an open environment and on most webpages there can be hundreds of opportunities to navigate to other online destinations. Worse still: pop-up images, hypertext, adverts, instant messages and emails all contend with the word, and with every interruption there is the chance that some small irony might be missed, or a subtle innuendo skimmed over. It is little wonder that authors are horrified by the idea of digitalisation.

These are interesting times for reading, and it is easy to submit to the view that we are on the precipice of the most significant change in literacy practice since Gutenberg made extensive reading available to the masses nearly five hundred years ago (Birkerts 1994). It should not be unreasonable, though, to suggest that rather than debate the "whether or nots" or the "pros and cons", we should now be moving into a position of thinking about how the literary establishment – including publishers, technologists, academics, and authors – can use the digital space to re-engage readers, re-invent literature and constructively enhance the experience of reading. More importantly, this thesis will argue that said group of literary practitioners should be looking at ways to enhance literature not for enhancement's sake, as is the case with an app such as *Alice for iPad* or even *Chopsticks,* but for better reasons. There is a need to imagine how the content of digitally enhanced long-form text can be presented with the purpose of adding real literary value. What value can be delivered by an enhanced e-book, and how can that value be delivered in a way that promotes as many of the venerated cognitive qualities of traditional, paper-based reading as possible?

As yet there are no definitive answers to such questions, but commentators are beginning to circulate a number of loose though interesting ideas. Marc Prensky, an American speaker and writer on education and learning (and perhaps most well-known as the inventor of the term "digital native"), suggests that the most interesting challenge will be to incorporate skills associated with traditional, paper-based reading, like critical thinking, into an on-screen, connected space (2001a, n.p.). And Hayles, whom I have already mentioned, warns educators of the need urgently to rethink the entire education system: in view of the fact that media-rich environments are dramatically changing the way young people think, linear learning environments, as well as paper and textbooks, are quickly becoming obsolete (Hayles 2007, p.188). Lastly, Hillesund adds that there could be

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> severe consequences if [screen-based technologies] did not include easily readable long-form text in which detailed descriptions, long arguments and complex narratives are decisive, providing students with important frames of reference indispensable for deeper understanding. (2010, n.p.)

The current, topsy-turvy debate is fairly well summarised in the most recent report comparing print, basic and enhanced e-book platforms. Released in 2012 by the Joan Ganz Cooney Center, the report, entitled "Print books vs. E-books", found that

> [w]hen measuring *child-book engagement* (e.g., direct attention, touch), more children showed higher levels of engagement for the e-books than the print books, though a majority were equally engaged by both book types … Children also physically interacted with the enhanced e-book more than when reading either the print or basic e-book. (Chiong, Ree and Takeuchi 2012, p.2)

However, the report also states that although e-books improved engagement, they were not as effective as print books in "literacy building" (p.2) and the summary concludes that "research should systematically examine what types, combination, and placement of e-books (e.g., hotspots, games) help or hinder learning and conversation" (p.4).

Let us acknowledge, then, that various scholars are reaching more or less the same conclusion: they are convinced that there is a need to engage young people in the digital environment, which is also the environment with which young people are most familiar; they are hopeful that new methods of interactivity in the digital reading space might improve young people's engagement with literature; and they are in agreement that it would be an important achievement if new digital reading spaces might allow the reader to retain some of the qualities of traditional, paper-based reading such as deep attention, critical thinking and literacy building.

Before the work done by Prensky, Hayles and Hillesund, humanities computing theorist George Landow had already theorised a number of ways in which hypermedia within a digital reading space might deliver value; value that the codex would not be able to deliver quite as effectively. Landow suggested that literature and literary theory – if correctly packaged in a digital reading space – would have the potential to introduce students to new

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forms of academic writing; facilitate interdisciplinary work and collaboration; break down elitist textual barriers by making all text immediately available; and free students from teacher-centred classrooms (1997 cited in Dobson & Willinsky 2008, p.289). Notably, Landow also suggested that the digital space he was trying to imagine would empower students by promoting critical thinking (1997 cited in Dobson & Willinsky 2008, p.289). In a 1989 article, "Hypertext in Literary Education, Criticism and Scholarship", Landow wrote as follows:

> Unlike books, which contain physically isolated texts, hypertext emphasizes connections and relations, and in so doing, it changes the way the texts exist and the way we read them. It also changes the role of author and reader, teacher and student. (1989, p.174)

In Chapter Five and Chapter Six of this thesis, using Douglas Rogers's memoir *The Last Resort* (2009) and Doris Lessing's *The Grass is Singing* (1994 [1950]), I demonstrate how a multimodal digital reading space (which uses a tablet computer as its technology) might deliver value by achieving the potential set out by Landow. However, while Landow's vision is understood within the context of an academic environment, the intention of this thesis is to *extend* the possibilities of the projected values of the enhanced or "amplified" book. More specifically, within the confines of a theoretical discussion, this thesis will attempt to demonstrate how a new aesthetic of literary presentation might stimulate renewed interest in the humanities and liberal arts; reinstate fiction as one of the central components in the education process; recapitulate works of fiction that have become increasingly obscure over time or inaccessible to young people; and "de-parochialise" what one might call "local" literatures within an increasingly globalised reading environment.

From this juncture, and before embarking on Chapter Two's discussion on the literary climate in the digital age, it might be helpful to clarify a number of important points.

First, the proposed *digital* aesthetics of literary presentation which I introduce in Chapter Five does not suggest that the primary text, or an author's narrative proper, should be changed in any way. The proposal made in this thesis does not contend that a literary work like *You Can't Get Lost in Cape Town* (1987) should be digitally repackaged to the extent that media becomes integral to the original story. To the contrary, this study proposes that existing or old

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media technologies, such as video and social networking software, might be repurposed within a digital reading environment in order to supplement primary texts. Nonetheless, this argument will keep in mind the idea that a requirement for hermeneutic immersion, as Hillesund reminds us, "is that technology offers minimal disturbances on the part of the user; that it becomes more or less transparent" (2010, n.p.). Accordingly, this thesis includes a number of arguments and suggestions for hypermedia to avoid becoming a fluency disruption.

Second, this thesis seeks to emphasise that there is a need for the current technology debate to evolve so that all stakeholders might proactively look to contribute to new reading experiences in such a way that the qualities of traditional, paper-based reading are protected, but an experimental hypermedia digital reading space is not squashed or ruled out of contention. Further, an experimental space, while steering the new technologies which make the touchscreen electronic interface of *Alice for iPad* possible, should also be exploring how theoretical visions for the future value of content, such as George Landow's (1997 cited in Dobson & Willinsky 2008, p.289), can be realised in the digital reading space. That is to say, apart from the proverbial "bells and whistles" of the tablets and e-readers that are racing out of Silicon Valley (two years after the launch of the initial iPad, there are already murmurings about the arrival of iPad 4), how might the instructional interface design of a digital reading space improve young people's engagement and understanding of literature, both new and old?

Third, while the cognitive differences between traditional, paper-based reading and digital reading are critically important to any discussion of digital literacy, I have tried to avoid some of the nay-saying narratives that dominate much of the new media debate. Accepting that there are many interesting points both for and against the new digital reading space, this thesis faces up to the overwhelming evidence that the digital age, together with its digital reading space, is upon us, and there is a necessity to develop constructive and valuable frameworks for future literacies that can take advantage of that space.

Lastly, given some of the concerns that have been raised about the future of the book in the digital reading space, Zoë Wicomb's refusal to entertain any proposal that looked to digitally enhance her literary work, was to be expected. I have great respect for Wicomb's work, and my intention here is to demonstrate how the enhanced e-book product, in its infancy, is

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capable of eliciting a variety of strong reactions, most of which are not unreasonable. Be that as it may, in hindsight I would have formulated the proposal that I put to Wicomb in a way that took into consideration the fact that words like "enhanced" and "e-book" might lead many authors to entertain a notion of online literatures as spaces where hypermedia has overthrown the autonomy of the text. That is not the intention of the model that I am proposing. My original, facilitated request to Wicomb should have emphasised that the idea was to find ways to enhance literature; and that such enhancement would seek to empower readers – via digital tools – so that they would have a better chance of achieving the deep attention of hermeneutic immersion. In many ways, this proposal argues for the use of technologies from a new generation to access the content and literary value of past generations.

In all likelihood Wicomb would still say "no, absolutely not". Hopefully, though, rather than seeing the experiment as just another instance of technology inching its way across the sheets on her bureau, she might at least acknowledge that the ideas to follow are the early stages of an attempt to navigate the digitalisation of books so that literature is *not* lost in the black hole of the internet, along with the ideas of the world's great authors.

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# CHAPTER TWO

## The Literary Climate of the "Digital Native"

The available literature, most of which is based on American studies, suggests that literary reading is in decline. It suggests that the decline affects all socio-economic strata of society and that there is a positive correlation between this decline and the increase in availability, scope and influence of digital media.

In a 2004 report composed by America's National Endowment for the Arts (NEA), *Reading at Risk* with a sample size of more than 17,000 adults, a summary of the quantitative results shows that between 1982 and 2002 there was a 10.2 percentage point decline in the number of US adults reading literature (p.ix). As the data becomes more specific, it shows that the decline is most severe in the 18- to 24-year-old age group, where the dwindling rates of literary reading are shown to be 55 percent more pronounced than that of the total adult population (2004, p.xi).

The NEA's most recent report, *To Read or Not To Read*, published in 2007, presented data from a number of American national studies conducted by US federal agencies and supplemented by academic, foundation and business surveys. While the 2007 report included many of the same findings as the 2004 report, of particular interest in the NEA chairman Dana Gioia's preface was the observation that as well as the general decline in reading among teenage and adult Americans, "both reading ability and the habit of regular reading have greatly declined among college graduates" (p.3).

The 2007 report was more careful to investigate reading behaviours that were emerging as a direct result of the ongoing digital revolution. Most notable is the speculation that, increasingly, time spent reading literature is shared with digital activities. The report found that 20 percent of voluntary reading time is shared by one or more of the following activities: watching television, playing television games, instant messaging, e-mailing or Web surfing (National Endowment for the Arts 2007, p.8).

Scholastic, the world's largest publisher and distributor of children's books, found evidence to support the NEA's findings in their own *2010 Kids & Family Reading Report: Turning the Page in the Digital Age* (2010), based on a sample of 1,045 children, aged 6-17, and their

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parents. The report found that as age increased, there was a strong decrease in the amount of time spent reading books for fun, a drop of almost 40 percent from the age of 6 to 17 years old (Scholastic 2010, p.7). And although based on perception only, 41 percent of parents said the time their children spend reading books for fun had decreased as a result of electronic or digital devices (Scholastic 2010, p.6).

One of the more recent reports, published in 2010, by the Kaiser Family Foundation, *Generation M²: Media in the Lives of 8- to 18-Year-Olds,* looked at an American national representative survey of 2002 3rd–12th grade students (Rideout, Foehr and Roberts). The report showed that during the ten-year period from 1999 to 2009 the only type of media usage in decline was print media; usage of the remaining media types, including television, audio content, computer usage, video gaming and movies, all increased by varying degrees (Rideout, Foehr and Roberts 2010, p.2).

The results of *Generation M²* also indicated that the sample group spent a massive 7.5 hours per day consuming media, almost 1.5 hours more than the figure reported by the same organisation five years earlier (Rideout, Foehr and Roberts 2010, p.2). Further, the report shows that as a result of the large amount of young people who use more than one medium at a time, an average of 10 hours and 45 minutes worth of exposure to media content are crammed into the 7.5 hours of daily usage. This is an increase of almost 2¼ hours of media exposure per day over five years (Rideout, Foehr and Roberts 2010, p.2).

These studies provide evidence to suggest that – at least in North America – traditional, paper-based reading is in decline and that, in terms of a forensic investigation, one could at a glance indict digital media as the primary suspect. In the context of this discussion, though, a much more thorough analysis is needed so that we may arrive at a summary conclusion from which an argument for the path forward can be more objectively hypothesised.

Before dissecting the theories proposed for why literary reading has found itself in decline, some observations need to be made upfront.

First, this is not a new concern: the question of whether or not reading is at risk and the extent to which reading literary fiction is in decline has been a concern for many years, especially since the advent of competing mediums of entertainment such as radio and television.

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Commenting on the 2007 NEA report, prominent author and cultural theorist Steven Johnson says:

> The problem … is that they are fundamentally rehashing the technological opposition of the television age, the kind of opposition that McLuhan wrote about so powerfully back in the 1960s: word versus image, text versus screen. (2008, n.p.)

Johnson is one of many critics who suggests that following reports like the NEA's *To Read or Not To Read,* the "bibliophiles", as they are sometimes called – including publishers, authors and academics – are once again propagating a message of panic; panic that with the death of reading will come fundamental and irrevocably negative changes to our societies. Indeed, in a sweeping statement in his preface to the aforementioned report, the NEA chairman comments that "[i]f, at the current pace, America continues to lose the habit of regular reading, the nation will suffer substantial economic, social, and civic setbacks" (National Endowment of the Arts 2007, p.4).

However, while it is true – given the central role of reading and writing in all aspects of literate society – that trends in reading habits and behaviours have always been important to chart and measure, they are of particular interest now as our civilisation goes through a digital revolution. In fact, in *Literary Crises, Old & New Information Technologies and Cultural Change*, veteran literary theorist Alvin Kernan argues that the current information and communication technology revolution is as culturally shocking as the changes heralded by Gutenberg's printing press. He contends that

> radical changes in so central a cultural activity as the means by which reliable information is acquired destabilize the established social order and disorient the individual's sense of himself or herself in relation to the world. (1989, p.159)

The second observation that needs to be made is that this thesis is not so much concerned with a decline in reading in general; its concern is with a possible decline in traditional, paper-based *literary* reading. This is where the 2004 NEA report becomes particularly useful, as its interests lie specifically with literary reading.

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It is important to make this distinction, since certain studies have shown it is highly probable that the omnipresence of digital screens has increased the amount of general reading undertaken by the American public (Liu 2005). This is often "highly related to work and family responsibility" and while it might consist of varying levels of news browsing and administrative functions, it should not be considered literary reading (Liu 2005, p.704).

Third, there is a need, in response to commentators such as the NEA chairman, to ask what it means to be "literate". What has literacy meant historically and what does it mean as people become ever more digitally connected? In the *Oxford English Dictionary* the word "literate" is steeped in the semantics of print culture: "Acquainted with letters or literature; able to read and write …" (Oxford 2007).

But as Mark Gibson discusses in *Beyond Literacy Panics*, the point is that

> as print has been displaced as the clearly dominant medium, [literacy's] meaning has tended to drift. An extended sense of "literate" to denote "a liberally educated or learned person" – a sense which dates from the eighteenth century – has been detached from print and applied promiscuously to produce a range of hybrid offspring: "visual literacy", "critical literacy", "media literacy", "cross-cultural literacy", "computer literacy", "technological literacy". (2008, p.75)

In fact, Steven Johnson presents this argument in practical terms and, without any discernible malice, mocks the sentiments of the NEA's chairman:

> I challenge the NEA to track the economic success of obsessive novel readers and obsessive computer programmers over the next 10 years. Which group will have more professional success in [today's] climate? Which group is more likely to found the next Google or Facebook? (2008, n.p.)

Actually, the argument based on the question, "what kind of literacy will have more value economically", is potentially dangerous. In this case, the danger would be that economic conditions are promoting certain digital literacies at the expense of more traditional measures of literacy.

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This brings me to another, somewhat controversial observation, namely that "illiteracy" does not always have to be viewed negatively. As Kernan very progressively states,

> [c]hange that is seemingly unstoppable often forces people to look for the opportunities – one of which is can "illiteracy" actually be a good thing? An emancipation of the imagination from limits imposed by old authorities? (1989, p.162)

It has already been tentatively proposed that a link can be made between the decline in reading and the rise of digital media. This thesis will now look at this proposition in more detail, suggesting the following reasons for the decline in literary reading: the rise of the "digital native"; the endangered practice of deep attention; and, the diminished importance of the humanities as a field of study.

Digital, on-screen interfaces supporting the digital revolution have been singular in their goal to "engage" as many individuals as quickly as possible. Design components of Web 2.0 (a term used to describe the second phase of the internet's evolution) aim to shift the user from a position of receiver of information to creator and contributor of information (Alexander 2009). According to Michael Goodchild of the University of California,

> [w]hereas the early Web was primarily one-directional, allowing a large number of users to view the contents of a comparatively small number of sites, the new Web 2.0 is a bi-directional collaboration in which users are able to interact with and provide information to central sites, and to see that information collated and made available to others. (2007, p.27)

Social software and social networking allow users to contribute and share information on the internet, but so do "microcontents" such as blogs, YouTube videos and wikis (Alexander 2009, p.152). According to Carey Jewitt (2006), a professor in education and technology at the University of London, a feature of Web 2.0 is not just what it can do, but also how it is presented. Usability trends have evolved to deal with the user's need to manage and engage with more information so that the Web 2.0 interface consists of

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> complex multimodal ensembles of image, sound, animated movement and other modes of representation and communication. Writing is one mode in this ensemble and its meaning therefore needs to be understood in relation to the other modes it is nestled alongside. (Jewitt 2006, p.316)

For the online reader, then, "multimodal reading is not primarily a continuous or discontinuous reading of verbal text, but rather composite reading in which attention jumps back and forth between illustrations and text" (Hillesund 2010, n.p.).

Of course, before a user can be engaged by a digital interface, he or she must first be connected. Apart from the evolution in design and usability, technology making the digital space more accessible continues to make rapid advances. *Generation M²* provides some notable statistics for the period 2004 to 2009: home internet access has expanded from 74 to 84 percent among young people; the proportion of people with a laptop has grown from 12 to 29 percent; 20 percent of media consumption occurs on mobile devices; and internet access in the bedroom has increased from 20 to 33 percent[2] (Rideout, Foehr and Roberts 2010, p.3). The report also shows that high speed internet access has increased from 31 to 59 percent, vastly improving the quality of the online experience (Rideout, Foehr and Roberts 2010, p.3). Further, in a 2011 study that tracked the media use of American youngsters, the authors report that "[i]nternet use is near-ubiquitous among teens and young adults. In the last decade, the young adult internet population has remained the most likely to go online" (Malikhao & Servaes 71). A summary of the findings show that "93 percent of 12- to 17-year-olds go online, as do 93 percent of young adults ages 18-29" (Malikhao & Servaes 2011, p.71).

While these studies are proficient at quantifiably illustrating the increase in connectivity over the past decade, the numbers fail to describe just how immersed young people living in a hyper-connected world actually are. My own interaction with the screen in front of me at this very moment is a *de facto* case in point. While typing these words I have two of my personal email accounts open, ensuring that I am updated instantly on any direct email messages. My

[2] There is little doubt that the popularity of wireless connectivity in the two years since the publication of *Generation M²*, as well as the explosive growth of smartphone sales must have dramatically increased the current estimation.

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social media channels are also open on the page: both Facebook and Twitter provide me with live feeds reporting the activities, moods and thoughts of my friends and family. I also receive updates and hyperlinks to a range of personal and professional interests which I have preselected. YouTube is another tab open on my computer, although not currently active, as I have been interested in watching a TED[3] talk video by author Elizabeth Gilbert. iTunes is open – I have plugged my iPod into the computer to "sync" it with my online playlist. Skype is available at the bottom of the screen, should I need to phone any one of my contacts who live in different countries, for free. What's more, my time-shifted television console will ensure that, while I am away from home, it automatically records a number of programmes that I am interested in watching when I have some time. Lastly, should I step away from my workstation for a 30 minute break, I will not have to relinquish too much digital control: my Blackberry smartphone is logged into my Facebook, Twitter and email accounts, and is also programmed to receive my Skype messages. If, by chance, my thirty-minute break includes having to stand in line for a cappuccino, perhaps, it is most likely that I will use my smartphone to view news, instant-message a friend, or even make a call.

This is the first time I have ever attempted to describe my own digitalised life and even I am surprised by just how "connected" I am to the cyber-world, at all times. In fact, the extent of such digital immersion is anecdotally summed up in the key findings of *Generation M²*, where the authors somewhat uncharacteristically break from their analytic language and offer the following comment:

> Try waking a teenager in the morning, and the odds are good that you'll find a cell phone tucked under their pillow—the last thing they touch before falling asleep and the first thing they reach for upon waking. (Rideout, Foehr and Roberts 2010, p.2)

There is no doubting the assertion that this generation, born after 1980, is "history's first 'always connected' generation" and that "[s]teeped in digital technology and social media, they treat their multi-tasking hand-held gadgets like a body part" (Malikhao & Servaes 2011, p.68).

[3] TED is a non-profit organisation devoted to "Ideas Worth Spreading". It started out (in 1984) as a conference bringing together people from three worlds: Technology, Entertainment, Design (Ted.com 2012).

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There has been a proliferation of terms used to describe this generation of "always connected" individuals. "Net Generation", the "Millennials", "Generation M" (or the "Media Generation") are just a few (Berk 2009, p.4). For the purpose of this thesis I will use the terminology of Marc Prensky. In his 2001 essay, "Digital Natives, Digital Immigrants", Prensky describes the generation of young people born since 1980 as "digital natives" owing to what he believes is an innate confidence in their ability to use new technologies (2001a, n.p.). According to Prensky, such innate confidence has grown out of an entire lifetime "surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age" (2001a, n.p.). He goes on to provide a sense of what it means to be a digital native, arguing that today's "average college grads have spent less than 5000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV)" (Prensky 2001a, n.p.).

After reviewing various sets of characteristics presented in the literature, Ronald Berk, emeritus professor at John Hopkins University, describes twenty common denominator characteristics assigned to the digital native. Many of them have already been reviewed, such as the well-documented facts that the digital native is both technology savvy and capable of multitasking; however, those warranting further discussion include the suppositions that the digital native learns by "inductive discovery" and that s/he has a "short attention span" (Berk 2009, p.10).

The fact that the digital native is more at home learning by "inductive discovery" is of interest because it implies that interactive media has created a learning style which might be described more as "exchange" than "reception". Literary fiction, and especially print literary fiction, has traditionally been a passive form of information consumption in which the reader has no way immediately to interact with a text. According to Jewitt, digital natives might perceive writing "as a kind of 'resistance' to the multimodal potentials of new technologies" (2006, p.323.). Jewitt says that

> [w]riting on screen functions to reference the values of specialist knowledge, authority, and authenticity associated with print. It signals the literary text and the educated elite or, more prosaically, examination and assessment. (2006, p.323)

Berk suggests that

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> digital natives prefer to learn by doing rather than being told what to do or reading text or manuals … They must be engaged, constantly connected with first-person learning, games, simulations, and role playing. (2009, p.10)

Dresang and McClelland go on to add that "[t]he best descriptors of the capable child of the digital age are: capably self-reliant, fiercely independent, curious, interactive, and 'multi-tasking'" (1999, p.162).

In many respects this allows for a much more empowered recipient of information, a connected young learner who is no longer the passive recipient of educational instruction, but is cast instead into an active learning role. In "The Digital Native – Myth and Reality", Neil Selwyn summarises the dramatic implication of this shift, suggesting that the new relationship leads young people "to construct alternatives to the core values of the traditional institutions and structures of previous generations" (2009, p.367). Selwyn adds that digital natives are not "passive consumers, and increasingly satisfy their desire for choice, convenience, customisation, and control by designing, producing and distributing products themselves" (2009, p.367).

One of the questions at the heart of this thesis is whether a reprogramming of the digital native's reading functions has led to conditions which have variously been labelled attention deficit hyperactivity disorder (ADHD), degeneration of the intellect, and enhanced multitasking skills in which individuals engage and interact with large tracts of information.

In Chapter Three, this thesis discusses the hypothesised neuro-cognitive changes supposedly heralded by the digital era, but for now it is useful to note that the activity of traditional, paper-based reading typically requires what is often referred to as "deep attention" (Hayles 2007, p.187). According to Katherine Hayles, this is the "cognitive style traditionally associated with the humanities" and is "characterized by concentrating on a single object for long periods … ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus times" (2007 p.187).

For any reader reviewing the studies mentioned earlier in this chapter, one of the most glaring questions is whether or not the new digital mediums are affecting the ability of individuals to

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engage deeply with a text. More specifically, will the digital native's chronic connectivity, ubiquitous screens and ability to multi-task across a variety of media allow him or her to practice the deep attention necessary for engaging with literary works?

To claim that deep attention has been replaced altogether is not helpful and in any case, such an absolute claim – certainly at this point in time – would be inaccurate. However, it is highly likely that the digital native has developed what Hayles refers to as "hyper attention", described as "switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom" (2007, p.187). Hayles goes on to describe the hyper-attention generation as one that displays strong tendencies towards ADHD, in general requiring a constant update of a variety of media and information inputs in order to remain interested (2007, p.190).

Moreover, in Ziming Liu's study, "Reading Behavior in the Digital Environment", surveys of screen-based reading behaviour found that while the activities of browsing and scanning, keyword-spotting, one-time reading, reading selectively and reading in a non-linear manner were all increasing, activities such as sustained attention, in-depth reading and concentrated reading were decreasing (2005, p.706).

Based on the research then, the digital native's hyper-attention and multi-tasking behaviours are very likely to impede activities that require a minimum level of deep attention. *Generation M²* emphasised the point that not only was reading print in decline, but 20% of that was being shared with other activities. And if, according to a study done at Stanford University, it takes 15 minutes to fully resume a mental task after answering an email or engaging in instant messaging (Iqbal and Horvitz 2007, n.p.), then sitting down to engage with a literary work will require an entirely different approach. In his book *Print is Dead: Books in our Digital Age*, Jeff Gomez comments:

> In terms of publishing, today's kids are not going to want to pick up a big book and spend hours in a corner silently, passively reading. Why in the world would they do that? It's not interactive. They can't share the experience with their friends. There's no way to change the book to suit their own tastes. Instead, they're going to ditch the hardback and head over to Facebook. (Gomez 2008, p.97)

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As a final word on her concept of hyper-attention, Hayles, although drawing on studies dealing with ADHD as a tool for understanding the digital native, is not trying to implicate digital mediums as agents of intellectual decay. Rather, in the essay “Hyper and Deep Attention”, she warns educators that new ways of engaging digital natives need to be implemented based on the fact that “these children grew up in media-rich environments” and “literally have brains wired differently from those of people who did not come to maturity under that condition” (Hayles 2007, p,192).

As an aside, when Hayles refers to “these children” (2007, p.192), she is referring to the digital native; that young person who was born post-1980. While this group of individuals is digitally literate, they grew up on the cusp of the digital revolution. They did not always have mobile phones and the internet; they read newspapers and may even have booked holidays by physically going to their nearest travel agent. Their education consisted mostly of print books and their brains were programmed to page through a textbook to retrieve information. Take a moment, then, to consider the implications of Hayles’s theory for the generation that arrived after the millennium. According to Sven Birkerts, these “will be the kids born into a preexisting electronic environment, who have soaked in the ambient media options with mother’s milk and who have been conditioned to see the book as just one resource among many” (1994, p.190). It is critical to imagine the experience of this generation in a study concerned about the future of literary works. To apply our own experiences and judgments to the debate without visualising the future would be quite futile.

Let us acknowledge, then, that humankind is currently in the midst of a major technological revolution in the form of the digital age. Research shows that this has changed the way we interact with information as well as the way we think. One could say that the digital revolution, together with the individual it has created, the digital native, are, in part, root causes of the decline in literary reading.

Where in this hypothesis does the well-documented (and debated) decline of the humanities fit in, and does its decline have any implications for the future of literary reading? While the digital revolution has physically (both in terms of spatial and cognitive changes) removed individuals from literary works, many commentators would suggest that, ideologically, certain changes have eaten away at the practical relevance or utility of the humanities, the liberal arts and, by default, literature.

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In *The Closing of the American Mind*, Allan Bloom suggests that the "political regime … needs citizens who are in accord with its fundamental principle" (1987, p.26). For many years in the US, this included individuals who supported, above all else, the Constitution and, with it, the ideals espoused by the French Revolution: liberty, equality and fraternity (Bloom 1987, p.29). In response to European fascism, the World Wars and the rise of communism, among other factors, the ideals of democracy were seen as critically important. In this context, the humanities lent themselves to an education in philosophy and the history of ideas. William Chace, a literary theorist who has taught the humanities at Berkeley, Stanford, Wesleyan and Emory, and served as president of the last two, says that in the 1940s and 50s, for the veterans,

> college implied security and tradition, a world unlike the one they had left behind in Europe and the Pacific. So they did what they thought one always did in college: study, reflect and learn. They would reconnect, they thought, with the cultural traditions the war had been fought to defend. (2009, n.p.)

As a natural evolution, according to Chace, for the generations that came after the veterans, "the centrality of the humanities to a liberal education was a settled matter" (2009, n.p.), which is why he found himself in the 1960s a student of the humanities trying "to make articulate many of the inchoate impulses and confusions of [his] post-adolescent [mind]" (2009, n.p.).

However, the digital native in an era of globalisation must contend with an ever-growing emphasis on the economics of technology. A recent *New York Times* article summarised the extent of this factor in an attempt to unearth the causes of the decline in liberal arts enrolment, contending that "[t]echnology executives, researchers and business leaders argue that producing enough trained engineers and scientists is essential to America's economic vitality, national defence and health care" (Cohen 2009, n.p.).

According to the same article, traditionally, "liberal arts education is, by definition, not intended to prepare students for a specific vocation. Rather, critical thinking, civic and historical knowledge and ethical reasoning that the humanities develop have a different

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purpose: they are prerequisites for personal growth and participation in a free democracy, regardless of career choice" (Cohen 2009, n.p.).

In spite of this argument, there is no surprise that the weighted importance of vocational studies over liberal arts studies in our capitalist, market-driven, technology-heavy society has reduced the number of humanities students. And in an era of Facebook and Google, Virgin Intergalactic space travel and hydrogen-operated cars, it is not unreasonable for a student or parent to question the value of a humanities degree, even more so when one considers that few students have the luxury of studying at university, let alone pursuing more than one degree. Chace argues that with

> the cost of a college degree surging upward during the last quarter century – tuition itself increasing far beyond any measure of inflation – and with consequent growth in loan debt after graduation, parents have become anxious about the relative earning power of a humanities degree. (2009, n.p.)

Studies in the US have shown that between 1970 and 2004, the percentage of English majors dropped from 7.6 to 3.9 percent, foreign languages and literatures from 2.5 to 1.3 percent, philosophy and religious study from 0.9 to 0.7 percent, and history from 18.5 to 10.7 percent (Chace 2009, n.p.). All the while, business majors have grown from 13.7 to 18.5 percent (Chace 2009, n.p.). In effect, for the humanities this represents a drop from a total of 30 percent to less than 16 percent. According to the Humanities Indicators Prototype, the humanities' share of college degrees is less than half what it was in the mid-1960s (Geiger 2009, p.6). In *The University in Ruins*, Bill Readings describes the situation as the old "university of reason" being pushed aside by the new "university of excellence" (1996, p.2). Although there are a variety of reasons for the decline in the humanities, few would argue with the simple fact that universities are entering an era where they must be "responsive to the market" (Delaney 2000, p.91).

For books and the plight of literary works, then, not only has there been over the last 50 years a gradual increase in the availability of alternative imaginary pursuits, but also a migration away from liberal arts towards vocational studies. In fact, in a world on the brink of a second major recession; where hypermedia and hyper-communication are exponentially increasing the amounts of information individuals are required to manage; and in a highly competitive

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job market where every hour is measured according to output, one may well ask: Where the time is to engage with literary works, let alone the luxury to dedicate an entire university degree to learning about the classics, culture, philosophy and history?

Commentators such as Hayles (2007) and Chace (2009) would no doubt add that compounding the existing challenges is the apparent unwillingness, complacency, or simply disorganisation in current humanities departments, making them ill-equipped to render their disciplines more relevant in today's world. This judgment would probably include the tardiness of the discipline of English to respond to new learning patterns among digital natives.

For example, in *The Rise & Fall of English,* Robert Scholes argues that a pedagogical approach that focuses on the "masterpieces" fails to address how young people should engage and read new media, specifically how to critically read "the highly manipulative texts of advertising and propaganda and other persuasive forms" (1998, p.169). Scholes says that because we are "the most mediated human beings ever to exist", English in today's world might look at focusing on teaching students to "be able to read, interpret, and criticize texts in a wide range of modes, genres and media" (1998, p.84).

Of course the decline of a tradition that teaches interpretation, comprehension, and rhetoric must have certain consequences for society. While tertiary institutions are churning out students who can work as specialists within the global digital climate, employers are rating written communication and leadership as the two applied skills most deficient among both high school and college graduates (National Endowment for the Arts 2007, p.14). As Bloom so eloquently puts it, "[e]very educational system has a moral goal that it tries to attain and that informs its curriculum", and in our current climate that goal is to create a digital and economic literacy at the expense of a critical and cultural literacy (1987, p.29). Unfortunately, it seems there is no longer a belief that "a steady application of the so-called 'great works' yields an accumulation of facts and perspectives that eventually constitutes an education" (Birkerts 1994, p.79).

The next question then, one which the German literary theorist Wolfgang Iser asked at a lecture for the Learned Societies Luncheon in California, is

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> why we may need [literary fiction], especially in view of the fact that literature as a medium is put on a par with other media, and the ever-increasing role that these play in our civilization shows the degree to which literature has lost its significance as the epitome of culture. (1997, n.p.)

Iser goes on to ask: "Does literature still have anything to offer that the competing media are unable to provide?" (1997, n.p.).

To answer these questions, it seems useful, in the context of this discussion, to draw on two profound examples from my own experience of reading literary fiction.

When I was nine years old, I read Enid Blyton's *The Secret Island* (1938). This is my first memory of a work of literary fiction that was truly pleasurable; reading it was not a chore, nor was it a didactic obligation. Rather it was an elective activity that trumped any of the alternatives, which, by the way, included television. Every time I opened the book I was immersed; spirited away by an appealing ideal, one that shared with me the possibility of autonomous adventure.

But my experience of *The Secret Island* had an antithesis, not more than two years later, in the form of William Golding's *The Lord of the Flies* (1954). The initial pages promised a similar adventure island template, and with a reading experience limited to themes of quest and discovery, I was preconditioned to expect nothing more.

But as the pages turned and the steady moral decay of the stranded community of youths was exposed, my eyes widened in horror as the words on the page began to construct a dark realism compelling me to read on, into the "adult" reading space.

This was in all probability the first time I was exposed to a complex socio-political discourse, a meta-narrative weaved into my own story, and planted, uninvited, into my conscious mind. It was of course hazy, but without a guide – for we had not yet discussed the book in class – I was beginning to separate layers of meaning. These layers included the actual story; the thought processes the story was invoking in me as a reader; the questions directed at my own experience that the story was able to isolate for me; and the re-evaluation of my understanding of humanity.

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It was as if all at once I was hounded by evanescent images of my own suffering at the hands of bullies. I was introduced to a discussion on societal law and order, in particular how much more susceptible children are to their primal instincts, and how these dangerous impulses are gradually placated as we learn to adapt to the structures that underpin the politics of community.

The loss of innocence as a young reader can now be seen as ironic, given the overriding theme of *The Lord of the Flies*, and I have no doubt that this novel in particular represents a similar shift in the lives of countless other readers. In hindsight I have a little more wisdom to formulate my thoughts, but the luminosity of these realisations at my time of reading *The Lord of the Flies* remains with me.

And so there existed a new historical event in my life: before *The Lord of the Flies* and after *The Lord of the Flies.* The former exists in my mind as the condition of reading exclusively for the purpose of entering imaginary worlds, and "seeing" those worlds. The latter exists in my mind as the beginning of a gradual understanding that the reader has the opportunity to participate in deciphering the code within the context of not just a book, but a book with an author, story, socio-political milieu and reader.

To further explain the importance of the transition that I, as a young reader, made between Blyton and Golding, I have borrowed a quote from Birkerts's book, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age* (1994). In this highly regarded book, Birkerts discusses the importance of literature for humanity, asking how the digital reading space may detract from our human experience. About the developmental experience of reading, he says:

> The main difference between childhood reading and reading undertaken later is that in the former, futurity – the idea of one's life as a project, or adventure, or set of possibilities – has not yet entered the calculation. The child reads within a bubble. He is like Narcissus staring at his lovely image in the water's mirror. He is still sealed off from any notion of the long-term unfolding of the life, except in perfected terms of fantasy: *I, too, will be a pirate ...* (1994, p.89)

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Birkerts goes on to say that later, at an adolescent stage, the novel begins to act as “a screen that will accept various versions and projections of the self” (1994, p.89) and, as an adult, the reader develops the ability to read the “universal patterns within fiction’s plots” (1994, p.89). From there, the opportunity exists to “create wisdom and insight and apply these to his or her own life” (1994, p.89).

Birkerts does not present this summary of his thoughts within a theoretical context, but his aesthetic opinions are no doubt based on more than just experience. It will be helpful then, without intending to lose the spirit of Birkerts’s nostalgic tone, to extrapolate further on his views on developmental reading.

The first point Birkerts makes is that one of the most critical transitions young readers make is to allow the novel to become a screen or “mirror” onto which he or she can project (1994, p.89). Iser, renowned as a theorist of literary reception, was particularly interested in this idea of projection, suggesting that alternative truths have the potential to be imagined vis-à-vis the possibilities that fiction allows (1997, n.p.). Iser suggests the following reasons why fictionalising is a necessity:

> [W]e can only be present to ourselves in the mirror of our own possibilities; or … we are determined by bearing all imaginable possibilities within ourselves; or we can only cope with the open-endedness of the world by means of the possibilities we derive from ourselves and project onto the world; or we are the meeting point of the manifold roles we are able to assume, in order to grasp what we make ourselves into. (1997, n.p.)

The idea that literature’s truths have – in part – stood in opposition to science and industry was discussed in Kernan’s 1973 essay, “The Idea of Literature”. Kernan postulates that the

> [c]onstant attempt of criticism has been to find or validate some energy or mode of knowing deep within the poet’s mind, and by extension all minds, prior to and more authentic than the logic and rationalism on which science and empiricism are based. (p.34)

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Historically, one of the motivations for this "deep", thoroughly humanistic exploration has been to demonstrate that art and literature can expose a special type of truth that will always evade cognitive language and science. Kernan refers to a certain kind of power that generates literature which

> [h]as been constantly sought as the source of the essential energy in literature, which reveals and makes lovelier and truer things than the rational mind can ever discover in its laboratories and with its computers … (1973, p.34)

The second point that Birkerts makes is that the adult reader develops the ability to grasp "universal patterns within fiction's plots" (1994, p.89). Beyond what Birkerts is saying literally, there is an implication here that no single universal pattern exists. There exist in the world many "truths" which are capable of both creating and altering what aesthetic philosopher, Nelson Goodman, would refer to as ways of "worldmaking" (1978, p.7). Perhaps one could say that as citizens within a society with a "conceptual system", we are exposed to the dominant truths and patterns that characterise that particular system at any given time. Literary works – by virtue of the fact that they are unreal – are not constrained by dominant conceptual systems and can thus conjure their own possibilities, albeit possibilities that are grounded somehow in existing structures of thought and/or experience. Expanding on this idea, reflection theorists[4] might postulate that in a complex relationship between what is "real" and what is "alternative", the reader is able better to understand the values and norms of society, and critically engage with these constructs in hypothetical ways (Albrecht 1954, p.426). Social control theory highlights the potential for menace in this model, pointing out that literary works have the potential to become either an agent of radical social change or social management (Albrecht 1954, p.432). However, Milton Albrecht, paraphrasing Franklin Fearing, takes a more optimistic stance, arguing that literature and art

> may reveal to an individual a wide variety of patterns of behaviour which he may accept or reject. In either case, his awareness of the range of possibilities, the degree of freedom for action, would be increased, the areas of significant meaning enlarged, and his horizon expanded. (1954, p.433)

[4] According to Milton Albrecht, "[t]he essential function of reflection theory was to 'explain' in social and historical rather than individual terms the quality and greatness of literature ..." (1954, p.425).

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To demonstrate, I will share another personal experience with reading, where – as a 15-year-old schoolboy – I moved from South Africa to Texas in America. My Grade 11 literature class was structured around the progression of American fiction, and, more so than in my American history class, I was able to gain a deeper understanding of American culture through the works of Henry Thoreau, Nathaniel Hawthorne, Herman Melville, William Faulkner, Mark Twain, Kate Chopin and Emily Dickinson.

I had over the years inherited an uninformed judgment of American culture. I am simplifying it here but in general my judgment was pervaded by an image of a country of gluttonous and arrogant individuals. But learning to understand America's puritan underpinnings, its philosophical isolation, its innovative self-sufficiency, its egalitarian ideals, its belief in the Constitution and its unwavering confidence in capitalism and free market trade, allowed me to better understand its collective cultural personality. That is not to say that I had become pro-American. Rather, American literary fiction forced me to re-evaluate a number of American conceptual and cultural systems, allowing me to develop a more complex understanding of that society.

Even more profound was my experience of reading Toni Morrison's *Beloved* (1997), a canonical American text which portrays a haunting personal tragedy of the American slave trade. Reading *Beloved* in the US, I was able to re-think my experience of growing up "white" in South Africa during apartheid, and more importantly, I was able to imagine the horrific psychological ramifications of apartheid for its victims. In *Beloved* I met American slavery as a whole, suffered in the intimate story of a ghost; I acquired a deeper understanding of the workings of memory, especially the notion of memory as a collective tragedy; and I learned a much closer truth about my own country: apartheid was made up of millions of individual horrors, most of which would never be told, but which would always linger in history to be remembered, forgotten, abused or recycled. It must be noted that I had read post-colonial African fictions, but it was only in a story with distinctly different conceptual and cultural underpinnings that I was able to gain a more profound insight into some of apartheid's deeper, more universal patterns.

The fact that *Beloved* deals with the story of a ghost is interesting, given what is said to be one of the crucial components of communicating the deep truths inherent in universal

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patterns: namely myth (Kernan 1973, p.34). According to Kernan, "[myth] has been used from the beginning to try to give both historical dimension and objective form to the basic power underlying literature" (1973, p.35). Myth can be described as the "prerational" or "undisplaced" forms that imagination takes before it is layered over with realism, logic and consciousness (Kernan 1973, p.35). In other words, while often not blatant, the energy found deep within a literary work is capable of revealing to the reader that which may be said to be a part of the collective unconscious and experience of humankind – a particular form of knowledge based on both real events as well as the accompanying mythologies that have shaped our cultural evolution. In the case of *Beloved*, myth as literary device was fundamental to my personal ability to access a number of interstitial truths and realities that lay closer to "home".

My own experience gives credence to Birkert's third point, namely the potential for the reader to create "wisdom" and "insight" and then apply these to "his or her own life" (1994, p.89). In *The Function of Fiction,* Ynhui Park suggests that

> [i]t is in the light of a projected world or worlds that the actual life can be better perceived, critically examined, and evaluated. It is in the light of various conceived lives that we can live at least imaginatively more and other lives than our own which are destined to be one, unique and irrevocable. (1982, p.424)

My brief memoir recounting some of my own poignant experiences with literature is an attempt to demonstrate that at its core, literature has been for me – and no doubt for countless others – my single richest educational source. Layered within a single story is the possibility of an imaginative adventure, a journey of self-discovery, a more nuanced understanding of history, and perhaps most importantly, lessons in the psychological workings of human interaction and the myriad possibilities therein.

In essence, literature continues to expand my awareness and helps me to see or evaluate meaning to the world. Birkerts summarises the importance of this fact, and like me, applies that importance to himself, but implying the magnitude of that importance for humanity as a whole: "More than anything else, reading created in me the awareness that life could be lived and known as a unified whole; that the patterns which make meaning are disclosed gradually" (1994, p.94).

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The proof continues to grow: in an age of digital revolution, there is a decline in the rate of literary reading; there is strong evidence to suggest that digital natives are slowly reprogramming to interact exclusively with digital media (to the detriment of books and activities requiring deep attention); evidence shows a rapid decline in both the size and influence of the liberal arts; and lastly, it is hypothesised that part of the blame for the decline in the humanities is the refusal of the guardians of the tradition to place more emphasis on its utilitarian benefits.

Furthermore, an analysis of the May 2011 American Association of Publishers Report shows that year-on-year, the largest growth in trade has been the e-book category, which has increased by 160 percent (Sporkin 2011, n.p.). The adult paperback and adult hardcover categories both saw their sales shrink: 18 percent and 23 percent respectively (Sporkin n.p.). To put the e-book sales increase in monetary terms, there has been an increase in sales from $149.8 million in May 2010 to $389.7 million in May 2011 (Sporkin n.p.).

These sales statistics are dramatic. There will be – and rightly so – a number of analysts who warn that we are still in an experimental stage of e-readers and digital literature, and that their continued success cannot be guaranteed. However, given the digital native’s reading habits, which have been discussed at length, it would not be careless to predict that the digital native as well as his or her succeeding generations will interact with almost all information online and on-screen.

In all likelihood, the aesthetics of literary presentation will change to adapt to the digital revolution and its native citizens, but rather than focus on the potential casualties of the tradition, there is a need for experts to take stock of the facts and then critically re-imagine the future of literature, hypothesising how it can become a meaningful part of the digital native’s life. If this does not happen, how will reading be reinvigorated? How will the humanities continue to have a meaningful impact on cultural development? And will we save the story? As Birkerts decrees, the world is moving towards a “progressive atrophy of all that defines us as creatures of spirit” (1994, p.194), and the decline in reading literary fiction is a fundamental part of that atrophy. But that is where Birkerts would leave the matter. Would it not be better if this brilliant thinker were to work towards a way of migrating into the digital reading space the spirit that we are now supposedly at risk of losing?

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# CHAPTER THREE

## Removing the "Versus":
## Print and Electronic Reading in a Digital Age

In the opening chapter of *Print is Dead*, Jeff Gomez reminds his readers that

> [p]eople love books. They love the way books look on their shelves, coffee tables and nightstands. People love the way books feel in their hands, and they even love the way books smell (well, the old ones yellowed with age and cured with dust). (2008, p.13)

Former editor of *Windows Magazine* Mike Elgan has a similar message:

> There is one unavoidable and fatal fact that will kill the nascent e-book market in its cradle: People love paper books ... They view "curling up with a good book" as an escape from the electronic screens they look at all day. They love to carry them, annotate them, and give them as gifts. Book collecting is one of the biggest hobbies in the world. (Elgan 2007, n.p.)

How very wrong Elgan would turn out to be. As noted in Chapter Two, between May 2010 and May 2011 the largest growth in trade year-on-year was the e-book category, coming in above both hardback and paperback titles, according to the American Association of Publishers Report (Sporkin 2011). In fact, Elgan must have been horrified when, seven months after he penned his article (entitled "Why e-books are Bound to Fail"), Amazon released its first e-reading device, the Kindle, and all available stock sold out within less than six hours.

Bryan Alexander explains that although e-book readers came onto the market as early as the late 1990s – with little success – the ability of the Kindle to capture the attention of the market in 2007 was based on its ecosystem: "Unlike many earlier devices, which required a cable connection, the Kindle connects wirelessly to the world" (2011, p.146). And given the advent of high-speed internet connectivity, the wireless capability of the Kindle allowed "users to access the specially designed mobile Amazon bookstore and quickly download content from it" (Alexander 2011, p.146). To put the speed of the interaction into perspective,

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using a Kindle, a reader is able to purchase and download a book within a mere sixty seconds. Of course, it has helped that millions of regular online users are familiar with the interface of the online Amazon bookstore, having already spent more than a decade purchasing print titles on that website.

Amazon, as the largest online retailer in the world, was able to thrust its weight behind its e-reader by reducing the cost of converting titles into digital formats. In many cases this resulted in e-books costing significantly less than their paperback or hardback counterparts (Alexander 2011). For example, Amazon claims on its website that 800,000 titles can be bought for less than $10 (Amazon.com 2012).

Other distinguishing factors include the compact physical size of the Kindle, its storage potential, the device's ergonomic screen technology, and its long battery life. At the time of the Kindle's first launch, Amazon CEO Jeff Bezos was careful to highlight features that might appease book purists: the device would neither make intrusive beeps, nor would its screen strain the reader's eyes (Levy 2007, p.57). Some of the more up-to-date Kindle e-readers weigh in at 170 grams, and with a screen size 16 by 14 centimetres and a depth of less than one centimetre, the current Kindle models are smaller, thinner and lighter than most hardcover titles (Amazon.com 2012). The device can store up to 3,000 books and, for as long as an individual has the device at hand, access to Amazon's entire library of reading material is instantly available at any given moment (Amazon.com 2012). As far as ease of reading goes, the Kindle has an e-ink display that is particular to many e-book reading devices (Amazon.com 2012). It differs from "typical computer or phone LCD screen[s], presenting a muted color palette (greyscale) without glare. This means the device can be read under both bright sunlight and artificial illumination" (Alexander 2011, p.147). Finally, as long as the wireless functionality is switched off, the Kindle's battery will last for up to two months before needing to be re-charged (Amazon.com 2012).

Alexander (2011, p.147) describes an e-reader as a portable, electronic device that allows us to "read stories in a specific digital format". At the time of its launch in 2007, the Kindle (like subsequent e-readers such as Sony's "Reader" and Barnes & Noble's "Nook") was invented as a reading device: its purpose was to present a text entirely unchanged, except in so much as it had been transformed into a digital format.

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Owing to the success of the Kindle, the e-book industry grew steadily between 2007 and 2010, but the only thing that had really changed was the technology. What one might call the aesthetics of literary presentation remained unaltered – information was still presented as plain text, except it was now in a digital format. In 2010, however, Apple released a tablet computer called the "iPad", and since then companies like Samsung, Blackberry, HTC and even Amazon have all released tablet computers of their own. Unlike dedicated e-readers, a tablet is a portable, colour-screen computer. The tablet is very similar to the popular Kindle device as far as ease-of-use goes (lightweight, slim design and large screen), but it also allows users to check their email, browse the internet, or download and utilise software applications. As a result, tablets are capable of presenting literary works in forms beyond plain text. The potential exists for hypermedia such as video, photographic imagery, pop-up information boxes, music, and hyperlinks to be added to the primary text to enhance or amplify the reading experience. However, although tablets support e-book reading applications such as Kindle and Apple's iBooks, in this environment the literary text has no choice but to share the screen with Web browsers, email inboxes, and social media applications.

I accessed my first e-book using an Apple iPad tablet. After installing Apple's iBook software onto the tablet, I downloaded, for free, Oscar Wilde's *The Picture of Dorian Gray* (2011 [1891]). The edition that I downloaded was not an enhanced e-book, so there were no hyperlinks, videos, audio clips or other hypermedia add-ons: this was simply a digital version of Wilde's original 1891 text. Although the content remained unchanged, the technology offered me several new experiences. My first decision was choosing whether to view the text in portrait with single-page layout, or landscape with double-page layout. Having decided on the former, I learnt that it was possible to turn the pages by touching the screen: on the top left to go back a page, and on the top right to go forward. By touching the bottom of the screen, I could activate a scroll bar that rapidly took me to pages of the text further away from my point of departure. Interestingly, if a reader is turning from page one to page two, the page does not simply refresh, it "turns" as a physical page would do in a printed book. In fact, using the touch screen functionality, it is possible to hold a page halfway through turning it, allowing the reader to view half of the page being read and half of the page overleaf. Aesthetically, the digital book – on this device – was not veering too far away from the book as we know it. At the far right-hand side of the screen the software mimicked the print book by showing a digital image of the remaining unread "sheets" of pages.

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Other new experiences included the option to adjust the brightness of the screen, to choose 11 different font sizes and six different font types, and to change the screen background from white to sepia. At the top right-hand-side of the screen a search function was located, which had the dual purpose of allowing the reader to search for a word within the text, or to search for a word or term on the popular online encyclopaedia, Wikipedia. However, the function I appreciated most was the electronic dictionary. The program's software allowed readers to touch any word and then instantly access its meaning via a digital dictionary. I, for one, have never before looked up so many words during the reading of any one novel. Ordinary dictionaries are cumbersome and filled with thousands of pages. To take one's attention away from the novel to look up a word in a print dictionary is a one-minute interlude at least, reserved in my case only for words upon whose definition the meaning of the text as a whole is dependent. In a digital text, a word's exact meaning, nuances, synonyms and antonyms can be found almost instantly.

The benefit extends beyond adjectives such as "panegyrical" (Wilde 2011[1891], p.221), which Wilde uses to describe the infamous Lord Henry Wotton. In the first chapter, Lord Henry and the artist Basil Hallward engage in an extended dialogue about the function of art. In this conversation many allusions to Greek mythology appear, and also, interestingly enough, to botany. Threatening to alienate the twenty-first century English-speaking reader further is Wilde's indulgent use of French, sprinkling the text with all the showiness for which his eccentric style was known. It is quite disorienting to read a number of words in a single sentence or passage that are unfamiliar, and so, as inconsequential as it may seem to some, it was a satisfying experience to be able to access the meaning of "laburnum" (Wilde 2011 [1891], p.6) and "convolvulus" (p.48) as I read. I was able to follow the conversation by referencing "Adonis" (p.9), reminding myself what a "dryad" (p.72) was, and learning about the aged woodland deity "Silenus" (p.81). Further, the French, "moue" (p.36), "Bacchant" (p.81) and "Hautbois" (p.98) did not obstruct my flow of reading or my understanding of the text. The first chapter of Wilde's book is not an exception; the entire novel is filled with allusions to high art, opera, and classical far-eastern culture. Far from feeling that these references excluded me from *The Picture of Dorian Gray*, I was given broader access than ever before to a classic nineteenth century work of literature by a tool as simple as a digital dictionary.

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The second tool particular to reading a digital literary fiction that proved most useful was my ability to search the internet within seconds of needing to do so. Thinking carefully about critical discussions on online distractions such as hypertext, and in particular how hypertext can distract from the focus of reading a novel, I made a point of never interrupting a reading session. However, as soon as I finished a reading session, I was able to close the iBook application and open my internet browser. After my first reading session I wanted to find out more about Oscar Wilde, including a biographical sketch and summary of his involvement in the rising philosophy of aestheticism. I thereafter became interested in exploring further how literary movements such as aestheticism and Gothicism are relevant to a reading of *The Picture of Dorian Gray*. This piloted the way to a more comprehensive "brush-up" on the history of literary movements. Finally, I was led to a question I had not yet asked myself since returning to an academic environment: is English literature still in a postmodern condition, or is there now a consensus among critics that it has moved somewhere else? Although the question is vague and perhaps imponderable, it arose from my reading of *The Picture of Dorian Gray* and the immediate access I had to information surrounding the novel after each reading session. Perhaps most importantly, the question led to my introduction to posthuman theory, of particular interest to me given the subject matter of this thesis. All of this happened late at night, and, based on experience, I am certain that had I been reading a print copy of Wilde's novel, the aforementioned research would not have taken place: who wants to get out of bed, sit at a desk and boot up a computer at 11pm?

In summary, a dictionary, novel and the internet were all contained within one compact device, allowing a disciplined reader greater access to the prose itself, as well as supplementary or associative media. Only a few years ago, the extent of such access would not have been possible without more time, a library and, perhaps, a professor of English literature. Admittedly, for a student of literature, this proposition may sound provocative, but for an individual without the benefit of academic guidance, someone who wants to read a nineteenth century classic of English literature, the potential of the digital tools surrounding an e-book is vast, to say the least. In particular, based on the reading experience described above, one could justifiably argue that the digital reading space may be conducive to a far more educative and integrated learning process than traditional print reading allows, with the advantage of speed, a feature not undervalued by the digital native.

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However, in his discussion of standard e-books in particular (i.e. not enhanced e-books), Alexander remarks that one of the most lauded benefits of an e-reader (as opposed to a tablet) is that it "isolates the reading experience from the rest of the world" and "[n]either the Kindle nor other similar devices support multitasking" (2011, p.147). Alexander goes on to make the point that

> while the digital isolation has some drawbacks, it could well facilitate a classic model of reading, where the story and its audience connect by themselves, contextualized only by the imagination. (2011, p.147)

Book purists are likely to list durability and physical engagement as two of the most important features of the codex book. Among serious commentators, though, the foremost quality of the print novel is seen as the classic model of reading to which Alexander refers: print leaves the reader and writer in a private world where, undisturbed by distractions, the imagination is left to its own devices (2011).

Within this private world, in the solitude of a linear, paper-based reading experience, readers are able to locate what Birkerts refers to as the "universal patterns within fiction's plots" and then "create wisdom and insight and apply these" to their lives (1994, p.89). To understand if this experience, however ineffable it may be, is particular to reading traditional paper-based books, we need first to establish how wisdom begins to form at a neuro-cognitive level, and indeed, how this crucial process is different when reading takes place in an online environment.

Although the available literature reports on a number of cognitive and behavioural differences between traditional paper-based reading and digital reading (many of which will be discussed in this chapter), perhaps the single most important point of departure is an understanding of memory, specifically because evidence suggests that cognitive processes at work within the mechanisms of memory are crucial to our ability to create meaning and wisdom from the information we gather.

Central to this discussion is Nicholas Carr's *The Shallows: How the Internet is Changing the Way we Think, Read and Remember.* In his discussion of neuro-cognitive changes taking place as a result of the digital revolution, Carr dedicates a short discussion to the work of

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Australian educational psychologist John Sweller, who has spent his career studying how the human brain processes information, and, more importantly, how humans learn from such information (2010, p.123).

Cognitive load theory (CLT) is central to Sweller's research. In order to demonstrate how people create wisdom, Sweller distinguishes between two types of memory: working memory and long-term memory (Carr 2010, p.123). Carr helps us to understand the concepts better by describing working memory as the "mind's scratch pad" and long-term memory as the mind's "filing system" (2010, p.123). In actual fact, Sweller's research shows that the function of long-term memory goes beyond simple filing; rather than merely a storage facility for facts, it is the site for creating what Birkerts (1994) describes as universal patterns or schemas. And it is precisely such schemas that form a foundation for depth of understanding, insight, perception and, ultimately, wisdom. More eloquently put, it is within the stores of long-term memory that we are able to organise "scattered bits of information into patterns of knowledge", allowing schemas to "give depth and richness to our thinking" (Carr 2010, p.124).

An essential part of this process is an individual's capacity to transfer, from working memory into long-term memory, information received. It will come as no surprise that this is not an easy process, not least because according to research humans are capable of storing only two to four items in their working memory at any one time (Carr 2010, p.124). Focus then, is the ability to harness those two to four items situated within working memory, and then systematically to transfer them into long-term memory, where more complex conceptual analyses and connections can take place. The importance of this mental function should not be understated. According to Carr, "[t]he depth of our intelligence hinges on our ability to transfer information from working memory to long-term memory and weave it into conceptual schemas" (2010, p.124).

This is precisely why so many anecdotal criticisms of the digital reading space accuse it of inhibiting attention, focus and deep reading. Instead of having a single focus, most on-screen reading experiences contain any number of hypertext links, moving images and other hypermedia sources and these are seen to be over-burdensome for any one individual's cognitive load (Carr 2010, p.125). These distractions are likely to prevent information stored in working memory from being transferred into long-term memory; even in cases where it is

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transferred, our ability to retain the information in a meaningful way, allowing it to contribute to knowledge patterns and schemas, is seen to be greatly reduced (Carr 2010, p.125).

The process above can also be understood in terms of the construction integration model (CIM), which proposes a three-stage process of text comprehension. In "Learning from Hypertext: Research Issues and Findings", Amy Shapiro and Dale Niederhauser summarise this process:

> The first [step] is character or word decoding, which is invariant across media. The second is the construction of a *textbase*. This is a mental model of the factual information presented directly in the text. The process of textbase construction is also thought to be invariant across media. The third stage in the process is the creation of the *situation model* ... A situation model is constructed when prior knowledge is integrated with new information from a text (the textbase). According to the CIM, the integration of prior knowledge with new information is necessary to achieve a deep understanding of new material. In other words, if no situation model is formed, no meaningful learning has been achieved. (2004, p.606)

In the case of reading a printed text, there are far fewer distractions, allowing the reader complete autonomy over the speed at which he or she processes the information. Controlling the speed of information intake allows the reader more effectively to manage the entire process of comprehension, from decoding the text, to choosing what components are important to working memory, and finally, having the focus to allow the natural migration of information from working memory into long-term memory, where the situation model can occur. Carr suggests that in the act of reading a book,

> through our single-minded concentration on the text, we can transfer all or most of the information ... into long-term memory and forge the rich associations essential to the creation of schemas. (2010, p.125)

If we accept the view that the new generation of digital natives is prone to a state of hyper-attention, then we must accept that the ability of paper-based text – as a technology – to tame that distractedness and subsequently dominate the reader's attention in a way that shepherds maximum comprehension, is second to none. However archaic Gutenberg's type appears next

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to screen technology, it is still considered superior in its ability to facilitate a situation model, and certainly Sweller's cognitive load theory, as well as the CIM, appear to support such a notion. The book acts against our instinctual urge "to shift our gaze, and hence our attention, from one object to another, to be aware of as much of what's going on around us as possible" (Carr 2010, p.63). Instead, as summarised by Carr,

> [i]n the quiet spaces opened up by the prolonged, undistracted reading of a book, people made their own associations, drew their own inferences and analogies, fostered their own ideas. They thought deeply as they read deeply. (2010, p.65)

At this point, two brief observations need to be made. First, while the act of reading print is considered – as a technology – superior in its ability to help the reader retain and meaningfully comprehend information, an increasing number of online publishers are presenting information in formats that attempt to reduce the extent to which electronic text formats overburden the cognitive load of their readers. Furthermore, pioneering online marketing experts such as Seth Godin (2011), often using principles based on neuro-linguistic programming, continue to publish work that discuss ways of engaging the reader's online attention, using engaging, multimodal formats and strategies. A quick search in the business section of book shops, or on the online bookstore Amazon, will reveal titles such as *Designing with the Mind in Mind: A Simple Guide to Understanding User Interface Design Rules* (2010) and *Don't Make Me Think: A Common Sense Approach to Web Usability* (2006). It is highly likely, therefore, that the sheer quantity of competing information available on the internet, as well as the desire for on-screen communicators to form more substantial hermeneutic relationships with their readers, will lead to changes in behaviour, in both the reader and the "writer".

Second, although it is difficult to argue with a theory proposing that an overload of working memory detrimentally affects an individual's ability to transfer information into long-term memory, a more up-to-date study that uses digital natives as its subjects might show that the capacity for human beings to process multiple pieces of information has increased in the last ten years as a result of this generation "growing up" in the digital space. For example, Neil Selwyn, a lecturer at the Institute of Education at the University of London, shows how an emerging body of scientific evidence suggests "that internet use enhances the capacity for

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young people to possess greater working memory and be more adept at perceptual learning" (2009, p.367).

Let us accept, though, that over-stimulation of the working memory has a negative effect on the brain's ability to transform information into long-term memory. The threat, as discussed above, is the likelihood that less opportunity exists for information to evolve in our minds in such a way that it might actualise in the form of mental schemas or wisdom. Aside from the impact of memory on "wisdom-building", studies have shown that screen reading may be impeding critical comprehension in other ways, too.

Gary Small, a professor of psychiatry at UCLA, studied neurological activities in two groups of people who were set the task of performing searches on Google. One group was made up of experienced Web users, while the other group was not. Small found that

> [b]ook readers have a lot of activity in regions [of the brain] associated with language, memory, and visual processing, but they don't display much activity in the prefrontal regions associated with decision making and problem solving. Experienced Net users, by contrast, display extensive activity across all those brain regions when they scan and search Web pages. (cited in Carr 2010, p.122)

While this might be interpreted as an argument supporting how the digital reading space might galvanise certain executive brain functions, the reality – according to Carr – is that the "redirection of our mental resources, from reading words to making judgments ... [has] been shown to impede comprehension and retention" (2010, p.122). In other words, understanding of the text is hampered because the surrounding online paraphernalia (including advertising, hypertext, hypermedia and social media) overburden the capacity of the language, memory and visual processing parts of the brain to operate effectively. Decision-making faculties – where should I navigate from here, what part of this page should I read, should I share this page on Facebook, should I "Like" this page – supersede the effectiveness of comprehension faculties. It appears that we cannot engage with a text while at the same attempting to make decisions forced upon us by the demands of online mechanisms attached to or surrounding it.

One of the most well-documented examples of digital distraction is the hyperlink: a highlighted word or phrase allowing readers to navigate to a related location on the internet.

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A hypertext environment is made up of "network-like information structures in which fragments of information are stored in 'nodes' that are interconnected by electronic hyperlinks" (Gerjets and Scheiter 2003, p.12). According to Carr, early commentators suggested that hyperlinks would be a "boon to learning", but in his review of a number of the studies, Carr concludes that "hypertext substantially increases readers' cognitive load and hence weakens their ability to comprehend and retain what they're reading" (2010, p.126). Carr's review highlights the same finding for hypermedia (images, sounds and moving pictures) located within a text: it weakens comprehension and learning rather than strengthening these functions (2010, p.128).

The hypertext and hypermedia studies that Carr (2010) reviews are convincing, but it should be mentioned that in the six hypertext studies to which he refers, none mentions the age of the participants, nor does he take into consideration the fact that hypertext – at least in terms of its accessibility to the masses – is nearly six hundred years younger than print text. Further, not one of the studies presented is less than ten years old, which raises certain key questions given the speed with which the digital revolution has moved over the past decade. Finally, there is a need critically to evaluate the instructional design concepts of hypertext, which in the context of his critique, Carr fails to do.

One reported study in *The Shallows* found that when readers were asked to read an electronic text containing hyperlinks, "comprehension declined as the number of links increased" (Carr 2010, p.128). However, that particular study was conducted in 1999, almost thirteen years ago. Not only was hypertext technology less than ten years old, but true digital natives would have been too young to participate. In fact the participants of that study would most likely have been classified by Marc Prensky (2001a, n.p.) as "digital immigrants": whilst dabbling in the digital reading space for certain purposes, they would have spent the majority of their time interacting with paper-based texts. Another study compared two group's readings of a literary text (Carr 2010, p.127). According to Carr, "one group read the story in a traditional linear-text format; a second group read a version with links, as you'd find on a Web page" (2010, p.127). The findings showed that the "hypertext readers took longer to read the story, yet in subsequent interviews they also reported more confusion and uncertainty about what they had read" (Carr 2010, p.127). That particular study was conducted in 2001, over ten years ago. Carr does acknowledge that "[e]ducation researchers have ... found that carefully designed presentations that combine audio and visual explanation or instructions can enhance

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students' learning" (2010, P.131) but his observation unfortunately stops there, and he does not provide examples.

A more careful review of hypertext and hypermedia technologies needs to take into consideration the fact that there is research (not all by "early commentators") suggesting that a combination of user-training and careful instructional design can "promote metacognitive strategies and augment learning outcomes" (Shapiro and Niederhauser 2004, p.608). In their review, Shapiro and Niederhauser summarise three studies with the intention of demonstrating that while hypertext is still not yet bound by a set of universally accepted rules, certain strategies may reduce the risk of hypertexts promoting extraneous cognitive load (2004, p.608). In the first study, "students who used a principled approach to hypertext navigation performed better on an essay posttest of conceptual understanding than their less thoughtful counterparts" (p.608). In this case, an ill-structured system of hyperlinks forced students to be "more metacognitive" in their navigation, increasing the level of engagement with the text (p.608). A second study, conducted in 2002, engaged four groups of learners with a hypertext about the human circulatory system (Shapiro and Niederhauser 2004, p.608). The first group of learners was paired with tutors who were trained in self-regulated learning techniques; the second group was trained on self-regulated learning techniques themselves; the third group was asked simply to complete a self-generated goal; and a fourth group was given a series of factual questions to answer.

> In the coregulation condition, the tutor encouraged metacognitive strategies by providing a variety of prompts. Specifically, she encouraged self-questioning, content evaluation, judgments of learning, planning, goal setting, prior knowledge activation, and other activities. In the strategy instruction condition, subjects were trained to do the same thing as the tutor but to do so as independent learners. The other two conditions provided no metacognitive prompts, tutors, or training. (p.608)

The post-tests revealed that the "sophistication of learners' mental models shifted significantly more when provided with tutors or metacognitive training than when simply given learning goals and no training" (p.608). In other words, learners who were given specific guidance on how to engage the information format for maximum cognitive benefit were more able to meet the challenges of a hypertext environment.

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In the third study, also conducted in 2002, subjects were presented with a hypertext designed to teach educational measurement.

> Half the subjects were assigned to work with a system that presented automated self-monitoring prompts in the form of questions. The prompts appeared each time a user moved from one node to another. If students were unable to answer the question correctly, they were encouraged to go back and review the page they had just read. The other half of the subjects were able to click freely on link buttons and move to a new page without answering any questions about their understanding ... Students in the metacognitive prompt condition ... outperformed their counterparts on a posttest that assessed their ability to apply what they learned to real-world problems (a measure of situation model learning). (p.608)

One more variable important to hypertext technology is the profile of the user. Early (Chen and Rada 1996) as well as more recent (Graff 2005) research indicates that hypertext efficacy cannot be separated from a conversation acknowledging that individuals have different cognitive profiles, each one responding in a different way to a range of instructional designs. For example, "active users" will benefit significantly more from hypertext than "passive users" (Chen and Rada 1996, n.p.) and, according to a study reviewed by Graff, "knowledge seekers" (those who pursue knowledge related to the content of the hypertext) will interact more effectively with hypertext than "feature explorers" (those who spend more time attempting to understand how the hypertext works) or "apathetic hypertext users" (those who are characterised by displaying no logical browsing strategy) (2005, p.93). In addition, certain studies have classified individuals' cognitive profiles as either "verbalisers" or "imagers" (Graff 2005, p.94). According to Graff's review, imagers "find concrete and readily visualised information easier with which to work than acoustically or semantically complex information, whereas the opposite applies to verbalisers" (2005, p.94).

Instructional design, the extent of mentoring or co-regulation, and the cognitive profile of the user, must all be considered when evaluating hypertext, hypermedia, and the future of such technologies. These studies suggest that, under certain controlled circumstances, hypertext is capable of actively engaging readers, allowing them to

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> feel a greater sense of control over what they read and how they read it ... Thus, many view educational uses of hypertext as emancipatory and empowering because it forces readers to participate actively in creating meaning from the text. (Shapiro and Niederhauser 2004, p.607)

As an aside, Carr dedicates a portion of his discussion to what are referred to as "switching costs" (2010, p.133), a familiar bane to people who find themselves immersed in the digital world. Whether it is an email alert, a Skype message, a Facebook notification, or an incoming sound cue on a smartphone, the screen is continually updating its user via its many modes of connectedness. Recent research conducted at Stanford University shows it takes 15 minutes fully to resume a serious mental task after answering an email or doing some instant messaging (Malikhao and Servaes 2011, p.73). According to Carr, "every time we shift our attention, our brain has to reorient itself, further taxing our mental resources" (2010, p.133). In Ziming Liu's study, "Reading Behavior in the Digital Environment", 45% of participants indicated they were experiencing a degeneration of their ability to read deeply (2005, p.707). One participant noted that it

> is hard to concentrate on reading documents on the web. I need to learn how to ignore distracting colourful or blinking graphics. Having to continually close unwanted pop-up windows is also very distracting. (Liu 2005, p.707)

Another participant commented on how "his/her reading concentration is interrupted by other tasks (e.g. email) when multiple windows are open" (Liu 2005, p.707).

I do not dispute the fact that on-screen text formats provide a deluge of potential distractions, from hypertext to hypermedia to the connected software that lies outside of the text itself. However, the purpose of sharing my experience of reading *The Picture of Dorian Gray* on a digital screen was, in part, to demonstrate that I was able to attend a deep reading session in a way that Graff would define as "knowledge seeking" (2005, p.94). Only once I had completed a reading session did I open an internet browser and start exploring a number of topics, prompted by the text itself. I concede that this was a standard e-book and not an enhanced e-book which, in theory, would contain many more multimedia distractions, but nonetheless I, as the reader, took responsibility for my own level of focus. In reading print text, there are also a number of distractions that may be regarded as "switching costs" – the

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phone ringing, a knock on the door, a television programme heard in the background – but we generally tend to, or should, accept responsibility for our own attention or lack thereof. Certainly while there is a level of hyper-activity encouraged by the on-screen reading environment, it should also be conceded that individuals have the choice to be distracted or not, to click on a hyperlink or not, to select a video or not.

I present an alternative view on the potential of hypertext not to refute what Carr's (2010) critique suggests about the tendency of existing hypertext structures to manifest as extraneous cognitive loads. Rather, this discussion should be framed within a contextual acknowledgement that there is, as yet, no dominant or conclusive theory of hypertext or hypermedia utility demonstrating how an individual can use hypertext/media simultaneously to take advantage of both the prefrontal regions of the brain (decision-making and problem-solving) as well as areas associated with language, memory and situation model learning. And while research into such matters continues to be pursued, the fact remains that between 1999 and 2009, the amount of time a young person was spending on a computer per day increased by nearly 500% (Rideout, Foehr and Roberts 2010, p.2). It is highly likely, then, that digital natives know how to be both active and passive users of hypertext. As far as their cognitive profile is concerned, while digital natives might be prone to a dominant style, it more likely that depending on the activity at hand, they are capable of being knowledge seekers, feature explorers *or* apathetic hypertext users. Finally, given the fact that hypermedia dominates the layout of on-screen information, tentatively we might say that digital natives are, by way of practice, more likely to be imagers than vocalisers, and therefore more likely to be amenable to multimodal expressions of meaning, for example a webpage that makes use of a number media to communicate a single message. These are all assumptions, but they are useful in so much as they identify that while research might not agree on hypertext, what is certain is that it will be on a connected screen that future generations engage with text, and the brain has already shown the ability to adapt. The problems that arise from this scenario have already been identified, but most would agree that attempting to halt the technology as a solution is not a realistic possibility at all. Rather, there is a need to adapt the technology to better suit those faculties of our thinking that we do not want to see falling into extinction.

Carr's (2010) final conclusion is that the internet is encouraging in people a new kind of reading; one that is not based on deep attention, and one that does not encourage an intensive, linear engagement with the entirety of a text. In fact, many would argue that internet reading

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cannot be defined as reading at all: rather it is simply browsing or keyword-spotting (Carr 2010, p.138). Within an online environment, confronted with infinities of information, both on a particular webpage and connected to an exponentially increasing number of associated webpages, we have learnt to scan, which has become "an end in itself – our preferred way of gathering and making sense of information of all sorts" (Carr 2010, p.138).

In "This is Your Brain on the Web" Rebecca Rosen summarises key findings of Maryanne Wolf, director of the Centre for Reading and Language Research at Tufts University. Wolf writes:

> When children are just learning to read, their brains show activation in both hemispheres. As word recognition becomes more automatic, this activity is concentrated in the left hemisphere, allowing more of the brain to work on the task of distilling the meaning of the text and less on decoding it. This efficiency is what allows our brains the time to think creatively and analytically. (cited in Rosen 2009, p.51)

For Wolf, the question is, "[w]hat would be lost to us if we replaced the skills honed by the reading brain with those now being formed in our generation of 'digital natives'?" (cited in Rosen 2009, p.51). The answer, according to Carr (2010) and Birkerts (1994), is that, increasingly, we struggle to engage with a text on a deeper level.

This is not just because we are increasingly "out of practice", though; rather, the precedence that digital reading is taking over traditional, paper-based reading is affecting the neural circuitry within the brain. Based on the evidence he presents, Carr postulates that "the neural circuits devoted to scanning, skimming, and multitasking are expanding and strengthening, while those used for reading and thinking deeply, with sustained concentration, are weakening or eroding" (2010, p.140). In other words, the skills used to navigate the infinities of information online are overwriting the skills needed to engage deeply and "vertically" with text. Carr goes on to say that

> [t]he mental functions that are losing the "survival of the busiest" brain cell battle are those that support calm, linear thought – the ones we use in traversing a lengthy narrative or an involved argument, the ones we draw on when we reflect on our

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> experiences ... The winners are those functions that help us speedily locate, categorize, and assess disparate bits of information in a variety of forms, that let us maintain our mental bearings while being bombarded by stimuli. (2010, p.142)

Perhaps the most telling manifestation of this theory is the fact that paper publications have started to adapt their layouts to mimic the interface of online texts. According to Carr, "many producers are chopping up their products to fit the shorter attention spans of online producers" (2010, p.94), and newspapers like the *Wall Street Journal* and *The Los Angeles Times* "have over the last few years moved to trim the length of their articles and introduce more summaries and navigational aids to make the scanning of their contents easier" (Carr 2010, p.95). Jakob Nielsen, a leading Web usability consultant, recommends that designers create content that is

> easy to comprehend by scanning: one idea per paragraph, highlighted keywords, and objective-sounding language so readers don't need to perform the mental heavy-lifting of determining what's fact and what's bias or distortion. (Cited in Rosen 2009, p.50)

Furthermore, in several South African print magazines, Quick Response Codes to supplement print text with multimedia or online competitions have become common. According to one magazine, a QR code is "basically a direct link to a special online content – simply click it with your [smartphone's] camera to avoid having to type in a long address" (*Go! Magazine* 2011, p.20).

Let us pause to acknowledge two crucial points. First, the way in which most on-screen information is currently presented is heavily weighted in favour of scanning and locating as much information as possible. This comes at the expense of a linear, progressive and logical text engagement that lends itself better not just to knowledge accrual, but also to forming meaningful schemas. Second, the often repetitive, intensive, interactive and addictive relationship humans have with the internet has in all likelihood led to adaptations in neural circuitry, so much so that print publications are increasingly modifying their layouts to provide readers with page design which mimics the digital reading space. The speed of this so called "neural-reprogramming", although quite startling, is hardly surprising. Whereas it was previously posited that the human brain was not malleable once it reached maturity in

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adulthood, the more widely accepted theory now is that throughout our lives the neural pathways within our brains are adaptable to change. According to Hayles, "human beings are born with their nervous systems ready to be reconfigured in response to the environment" (2007, p.192). Hayles goes on explain that "[i]n contemporary developed societies, this plasticity implies that the brain's synaptic connections are coevolving with an environment in which media consumption is a dominant factor" (2007, p192). Online activities such as video gaming are structured to respond to, or reward the participant, and this activates "the same dopamine (pleasure-giving) cycle in the brain responsible for other addictive pursuits such as gambling" (Hayles 2007, p.194). By way of example, Hayles refers to a study in which a thousand gamers were asked what motivates them to play video games (2007). The results illustrated that "gamers found the opportunities offered by the games for achievement, freedom, and in some instances connections to other players even more satisfying than the fun of playing" (Hayles 2007, p.195). Hayles postulates that the activity was heightened because of feelings of "autonomy, competence, and relatedness" evoked in online gaming (2007, p.195). Carr's review of the literature shows similar results, specifically that the internet offers a rich multi-sensory experience, a response and reward system that "encourages repetition of both physical and mental actions" and an interactive space that promotes young people's obsession with staying connected to friends, events and news (2010, p.116-118).

The enormous significance of these points itself cannot reverse the digital revolution, nor can it stop the wave of first-generation digital natives. What it should do, though, is force us to ask how we can modify on-screen experiences to include the acknowledged and celebrated cognitive processes that traditional, paper-based reading has been shown to "kindle".

Inherent in the texts of Carr (2010) and Birkerts (1994) is a warning, an almost apocalyptic undertone, bringing to the reader's attention the fact that in 2012 most reading is not conducive to the ineffable wisdom made possible by traditional, paper-based reading. Both these scholars are, in a sense, "blowing the whistle", not in the hope that future surveys will show an increase in the number of individuals reading print – they know that such an outcome is a most unlikely. Rather, they are – or should be – blowing the whistle in the hope that before print and the codex book get relegated to a kind of antiquity, humankind should reflect carefully on the cognitive mechanisms central to the reading process, and formulate ways to integrate these processes into the digital reading experience. Hayles adds her opinion

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that the schism is exacerbated because educational institutions have retained their traditional and long-standing belief in deep attention, even while an entire generation of young people are being re-wired predominantly to utilise their hyper-attention (2007, p.188). She says:

> [S]erious incompatibilities arise between the expectations of educators, who are trained in deep attention ... and the preferred cognitive mode of young people. ... We would expect a crisis, which would necessitate a reevaluation of the relative merits of hyper versus deep attention, serious reflection about how a constructive synthesis of the two might be achieved, and a thoroughgoing revision of educational methods. (2007, p.188)

Not all technologists on the frontline of the debate are content to let the internet dictate the new relationship that humans have with information. For instance, although “Digital Natives, Digital Immigrants” has been criticised as being unsubstantiated, the author, Prensky, acknowledges the importance of the type of “reflection” encouraged by traditional text-based books. He argues that one of the most interesting challenges is “to figure out and invent ways to include reflection and critical thinking” in the education of digital natives, but that this should be done within the realm of the digital native’s online space (2001b, n.p.). The resounding message of both Hayles (2007) and Prensky (2001a; 2001b) is that our minds are changing, but our education systems are not.

Kernan suggests that “individuals and societies want and need things to mesh and cohere, not pull in opposite directions, no matter how fruitful the tension is said to be” (1973, p.40). This is exactly the problem in the case of print versus text today: prominent scholars, theorists, technologists and cultural commentators polarise the debate to such as extent that the development of online literary reading is in danger of being left in the hands of the “machine”. In the absence of humans *guiding* an experience that is based on their wisdom, the machine – with mass media as its default operator – will take the wheel, leaving the literary theorists and the technologists to play out their battle in isolation.

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# CHAPTER FOUR

## Enhanced e-Books: Waiting in the Shadows

David Farland's novel, *Nightingale* (2011), was released first as an enhanced e-book app on 27 May 2011 by East India Press – the audio book and limited edition hardcover releases, playing second fiddle to the enhanced e-book, would follow shortly after. Production of this novel included a team much larger than the traditional author-publisher duo, with the publisher's page listing the executive producers, assistant director and animator, photographer, illustrators (of which there are six), "3D Artist" and musicians (Farland 2011). In total, a headcount of the individuals involved in the *Nightingale* project comes to 23. It is no wonder that East India Press is described on its website as a "re-envisioned publisher for an evolving industry", proclaiming that

> [f]ar more than in traditional publishing, East India relies on a convergence of talent from multiple media. Printed prose melds with illustration, photography, filmography, sound design and music to produce a rich media literary experience. (East India Press, 2011)

While standard e-books have seen considerable sales growth since 2007, enhanced e-books have been slow to gain momentum, with many cynics suggesting that they will prove too gimmicky for the current market. Evan Schnittman, executive vice-president of Hachette Book Group, is reported as saying during his keynote speech at the April 2011 London Book Fair that "enhanced will have an incredibly big future in education, but the idea of innovating in the narrative reading process is just another non starter" (cited in Jones 2011, n.p.).

In 2011, though, East India Press was just one of many "re-envisioned publishers" which began to produce multimedia fiction and nonfiction. A number of these publishers, including Atavist, Booktrack and Moonbot Studios, will be discussed later in this chapter, but for now let it be noted that "pedagogical" enhanced e-books as well as enhanced e-books within the children and young adult categories have made promising inroads. Recent titles include a number of successful releases by Touch Press, a digital publishing company whose aim is to "create a new kind of book that makes use of emerging technology to redefine the book, reinvent publishing, and forever transform the act of reading" (Touch Press 2012). As an example, *The Elements* (2011), which is an app that has interactive images of each of the

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periodic table's elements, sold more than 250,000 copies, amassing a revenue of over $2.5 million (Alter 2012). Another Touch Press release was an app version of *The Waste Land* (2011a) by T.S. Eliot which includes "a facsimile of the manuscript with edits by Ezra Pound, readings by Eliot recorded in 1933 and 1947 and a video performance of the poem by actress Fiona Shaw" (Alter 2012). According to Alexandra Alter, a *Wall Street Journal* reporter, *The Waste Land* cost $120,000 to produce, and this investment was recovered within four and half weeks of the release (2012). One of Touch Press's most recent releases is called *Skulls by Simon Winchester* (2011b), an app which explores a collection of three hundred animal skulls. Features include

> an intuitive interface for exploring the collection, revolutionary differential scrolling in the chapter pages and 3D-stereoscopic presentation of every skull. There is also a powerful facility allowing up to four skulls to be compared in locked rotation side by side. (Apple Store Online 2012b)

Alter refers to Touch Press's current offerings as "digital versions of coffee table books" and suggests that nonfiction titles are easier to assimilate into the conventional reading schemas of most readers (2012, n.p.). Alter adds that, to date, the publishing industry has not "seen any breakout hits that are enhanced in the fiction world" (2012, n.p.).

Perhaps in anticipation of the likely success of pedagogically enhanced e-book titles, Apple recently announced the release of digital interactive textbooks for iPad. On their website, Apple explains that "[t]oday's students have grown up completely immersed in technology. iPod, iPad, computer — these are the ways they interact with their world. They need a textbook made for the way they learn" (Apple.com 2011). Such enhanced textbooks feature three-dimensional and interactive images, interactive photo galleries, videos and quizzes. They also contain technology previously missing from on-screen learning environments such as the ability to highlight, underline, and add notes. The annotations made by the student appear together in one place. Furthermore, Apple has included a feature called "Study Cards", where a student's

> notes and highlights automatically appear on study cards. Flip them over and find the definition of a glossary term or the note attached to the highlighted passage. Choose which highlight colors to review, and include chapter vocabulary from the glossary —

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> automatically. To make sure you really know your stuff, you can shuffle your cards to study. (Apple.com 2011)

As a sample title, Apple has released a free version of *Life on Earth* (Wilson, Ryan and McGill 2012), a multimedia biology book that includes interactive features such as an animation of DNA, videos of ants and invasive trees, and quizzes (Alter 2012).

According to online magazine *Apple Insider*, Apple's digital textbook project was inspired by one of 2011's most lauded enhanced e-books: *Our Choice: A Plan to Solve the Climate Crisis* (2011a) produced by Push Pop Press (Apple Insider 2012). *Our Choice* is based on the award-winning book and film production *An Inconvenient Truth*, a documentary in which Al Gore warns viewers about the implications of global warming. Created specifically for the iPad, the format of the app reads like a traditional book: it is segmented into chapters and the reader is presented with a linear, left-to-right reading experience. The bulk of the app is made up of text, but there are a number of different embedded interactive media. In the introduction the reader can "pinch" a thumbnail image to enlarge a photograph of a native Alaskan. She is standing in front of her childhood house which has collapsed, reportedly because of melting permafrost (Push Pop Press 2011a). The reader can then tap a map icon on the bottom right of the photograph to view a world map with a red flag showing the origin of the picture in question. This is an example of a static image (although it does pan-out revealing more detail) but there are also a number of videos and interactive charts that can be enlarged during the reading experience. For example, in the first chapter the reader can pinch to enlarge a moving illustration describing the various forms of pollution emitted on earth, with an audio explanation by Gore. Images with a hand icon in the top right corner indicate that the reader can interact with a specific chart. In chapter four, one of the interactive charts allows the reader to tap to view the wind-generation capacity of the world's top ten wind energy production countries, or tap another link to view the wind power per capita in a particular country. Apart from the science-based discussion, *Our Choice* includes some unexpected features which serve to break the technical writing with an emotive narrative. At the end of the introduction, Gore reads one of his own global warming poems, written in Tennessee in 2009, with a static image of a fast disappearing, sun-kissed ice-berg acting as a backdrop (Push Pop Press 2011a). Chapter four includes "The William Kamkwamba Story" *Moving Windmills*, which is a short video about the incredible story of a young man who builds windmills to power his village in Malawi (Push Pop Press 2011a).

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*Our Choice* is an example of an app that has the potential to function optimally on a tablet computer. In a traditional book format, explanations such as a description of wind turbine mechanics are difficult to understand in the form of a text-only description. The *Our Choice* app allows the reader – at his or her own discretion – to supplement a text-based description with illustrations, maps, videos, and interactive charts. In the case of the wind turbine, I was able to pinch to enlarge a video illustration of a wind turbine which was supplemented by Gore's oral explanation. As well as the text-only description, my understanding was enhanced with affecting visuals, synchronised with a succinct auditory elucidation.

While the following summary of *Our Choice* is subjective, it is with earnest that I say that the *Our Choice* app has taken a relevant topic and presented it in one "book" as a cross-media app; it is my personal textbook on climate change which contains text, video, imagery and charts. The embedded media are neither difficult to use, nor do they link through to an endless number of additional media which might disorientate the reader. Incidentally, Push Pop Press was subsequently purchased by social networking giant Facebook, whose intention was to use the expertise within the Push Pop Press team to evolve a user's profile page into a timeline-like format: a complete history or "story" of the user's life told via status updates, YouTube videos, photos, life events and shared hyperlinks. According to the Push Pop Press website,

> [a]lthough Facebook isn't planning to start publishing digital books, the ideas and technology behind Push Pop Press will be integrated with Facebook, giving people even richer ways to share their stories. (Push Pop Press 2011b)

It is this rich "story" experience to which individuals living in the digital world are becoming accustomed, whether they are reading the news, interacting on social networking sites such as Facebook or, now, reading a textbook or enhanced documentary. And although we are still in what might be called an "experimental" stage of enhanced e-books, indications are that the pedagogical category is the most likely to grow, with the potential to revolutionise the learning experience. Even in South Africa, considered by many to lag behind the technological jet-stream, a recent *Times Live* article entitled "iPads for Elite Schools" reported that "at least one private school in Johannesburg has sent letters to parents informing them that all Grade 6 and Grade 8 pupils need to have iPad 2 tablets by July". The registrar of

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Reddam House in Cape Town said in a statement that the school had not yet introduced tablet computing in classrooms, but added it was only a matter of time before it moved in that direction (Child 2012, n.p.).

Somewhere between the black and white of fiction and nonfiction digital literature, sitting in a grey, but interesting space, is the boutique publishing house, Atavist. Although still loosely classified as nonfiction, Atavist produces original "stories" for digital and mobile reading devices (Atavist 2012). Atavist claims to have "created a new genre of nonfiction, a digital form that lies in the space between long narrative magazine articles and traditional books and e-books" (Atavist 2012, n.p.). The website's brief explication is enough to see how, although not yet fiction, Atavist's titles are in a very different category to *Our Choice* (Push Pop Press 2011a) or *The Elements* (Touch Press 2010):

> The topics may vary, but every Atavist story will be a narrative—around a crime, a scientific mystery, an adventure, or any other human drama—with characters and events. Pieces are laced with photography, sound, and video, where appropriate (and as the device allows). Each one will be edited and fact-checked. (Atavist 2011, online)

The Atavist app can be downloaded from the Apple online store for free, and then each title – which can be downloaded onto iPhones, iPads and iPod Touch devices – can be downloaded for $2.99 (titles can also be downloaded onto e-reading devices such as the Kindle and Nook, but would come without any media enhancements). Via a high-speed internet line the app itself, as well as each of the titles, can be downloaded in less than sixty seconds.

One of the earliest titles released by Atavist is called *My Mother's Lover* by David Dobbs (2011). This true story begins when Evelyn Jane (the author's mother), in her last days, reveals that the true love of her life was Norman "Angus" Zahrt, a married World War II flight surgeon (Dobbs 2011). The couple met during the war and spent a year living together on an American military base in Hawaii, before Angus was deployed to the Pacific islands, where his emergency rescue squadron was shot down by the Japanese, killing everyone on board (Dobbs 2011). Although this is the reason that Evelyn Jane wants her ashes to be scattered in the Pacific Ocean off Hawaii, her children are ignorant of the name of their mother's ex-lover, let alone that he was a married World War II flight surgeon. *My Mother's*

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*Lover* is a record of David Dobbs's journey as he uncovers the story of his mother's World War II romance:

> Intrigued by his mother's hidden longing, Dobbs embarked on a reporter's quest to uncover Zahrt's fate, and that of his family. The story he returned with is an extraordinary tale of love, war, and how we confront the lost chances in our lives. (Atavist 2011a)

With any of Atavist's titles there are two icons that are prominent at the top of the screen: the "in-line extras" (activated on the top left of the screen) and "audio book" (activated on the top right of the screen). The latter icon is simply a button that allows the reader to turn on the audio narrator. The "in-line extras" icon activates the available embedded media, which in the case of *My Mother's Lover* include time-lines, character descriptions, photos and photo galleries, maps, official World War II documents, technical notes, Web hyperlinks and videos. The "in-line extras" icon can be tapped on or off, making enhancements to the text an optional feature, controlled by the reader. If the "in-line extras" functionality is turned on, the transition within the text is subtle: rather than the traditional blue, underlined text which signifies a hyperlinked node, Atavist's embedded media are signified by raised, back-shadowed text words or phrases. Each back-shadowed word or phrase is coupled with a small but obvious symbol, such as a camera to indicate a photograph, a globe to indicate a map and a computer to indicate a website. There are a number of easily accessed standard features as well, such as the option to change the text size, access the "story explorer" (which allows the reader to move easily between chapters), search for specific text within the narrative, leave a comment, share the narrative with friends via email, or send a link directly to social networking sites such as Facebook or Twitter. Atavist titles also have a dictionary function which operates in exactly the same way as that referred to in the e-book version of Oscar Wilde's *The Picture of Dorian Gray* and so, for example, in chapter one, I was able to search for the definition of "lei", which is a Polynesian garland of flowers. Dobbs's brother – scattering Evelyn Jane's ashes from a canoe in the Pacific Ocean, "lifted the leis one at a time and dropped them into the water"; later in the chapter we are told that "Evelyn Jane Hawkins Preston Dobbs, as if eager to get there, dove straight for the bottom" (Dobbs 2011). The words "the bottom" are followed by a camera icon and tapping the icon activates a pop-up box of a photograph taken by Dobbs's brother of the leis floating in the Pacific with the Hawaiian coastline in the background (Dobbs 2011).

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In *My Mother's Lover,* Dobbs has been able to find a number of old photos and photo albums, which he has included in the text. More than just photos of his mother with her lover, as he plots the history of his mother's life, Dobb's has included several items of contextual media: a photo of his mother's grandparents; a photo of Evelyn Jane at two years old taken in 1921; a snippet from the *Wichita Record-News's* society page from 8 October 1940 detailing Evelyn Jane's first marriage and a photo album of Evelyn Jane's years living with her parents as a young adult (Dobbs 2011, chapter one). Further, as a reader who enjoys context, such as the maps that Tolkien included at the beginning of *The Lord of the Rings* (1954), I thoroughly enjoyed the ability to view on a map the different locations to which Dobbs refers, such as exactly where Wichita Falls is located in the United States.

In chapter four, as the depiction of the romance of Evelyn Jane and Angus Zahrt is coming to a climax, and Zahrt is posted to an Emergency Rescue Squadron (ERS) stationed on the Northern Marian Islands in the Pacific Ocean, Dobbs uses the opportunity delicately to step away from the love story and into a discussion of rescue squadrons during World War II, in particular those operating during the height of the US-Japanese conflict (2011). The text includes a link to a webpage that better explains B-17 warplanes, and Dobbs adds a photo of a "flying boat" or a "Catalina PBY" (2011, chapter 4). The narrative provides an explanation on how US search and rescue missions were executed in the Pacific Ocean and this discussion is supplemented with real US government archived video footage from the Second ERS. The footage includes the oral history of Mark Kishego, a former co-pilot of the Fourth ERS, who describes that squadron's strategic role in the "Pacific War" (Dobbs 2011, chapter 4). Kishego's oral account, which accompanies the video footage, was recorded in 2007 and it is obvious as the narration starts that Kishego must now be in his late eighties or early nineties. While watching black and white images of rescues in the Pacific, the reader listens to the old voice – melancholic and pensive, with pauses that suggest the speaker is struggling to recount his experience. Towards the end of his account, Kishego discusses an instance of an attack on a neighbouring US squadron, and stutters as he describes walking among the dead bodies the following day. He says "and that's the first time that I realised ... uh ... [long pause] ... that war was just one helluva dead-end" (Dobbs 2011, chapter 4).

The most recent release by Atavist is *Baghdad Country Club* by Joshuah Bearman (2011). Bearman tells the story of the rise and fall of the real-life "Baghdad Country Club", the first

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independently run bar in Iraq's Green Zone, during the war's bloodiest years. The blurb on Atavist's website reads:

> Welcome to a place where even beer runs are a matter of life and death. As the Iraq War draws to an official close, Joshuah Bearman tells the funny and poignant story of the real-life Baghdad Country Club ... Against all odds, its proprietors struggle to keep their raucous watering hole safe and well-stocked as the insurgency rages outside. (Atavist 2011b)

All of the same functionality found in *My Mother's Lover* applies here, including "in-line extras" and the option to activate the "audio book". Chapter one is available only as an illustrated video narrated by the proprietor of the bar, telling the story of how he came to set up such a risky venture (Bearman 2011, chapter one). I will not go into as much detail here but, as with *My Mother's Lover, Baghdad Country Club enables* the reader to access a specific nonfiction story (this one being very current) vis-à-vis an immersively engaging "story". This is a compelling narrative that reads like a fiction while at the same time offering the reader the opportunity to learn about the US-Allied secured area in Baghdad ("The Green Zone"), or click on a link to view a brief history and explanation of the Baath Party (Bearman 2011, chapter three) or even grasp a basic understanding of the middle-east Sunni-Shiite conflict (Bearman 2011, chapter 11). *My Mother's Lover* and *Baghdad Country Club* are "stories", but they are also "lessons", and those lessons are not in the form of long articles; they are accessed optionally via an on-screen, graphic-rich environment.

While the migration to "enhanced" might seem more natural for nonfiction titles, there certainly appears to be growing activity in the fiction category, even among some of the industry's most established publishers. There is little doubt that one of the contributing factors is the ever-increasing popularity of e-readers and tablet computers. According to one report,

> the share of adults in the United States who own tablet computers nearly doubled from 10% to 19% between mid-December [2011] and early January [2012] and the same surge in growth also applied to e-book readers, which also jumped from 10% to 19% over the same time period. (Rainie 2012, n.p.)

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It is no wonder, then, that major publishing groups reported they were planning to release more enhanced e-book titles in 2012 (Alter 2012). As previously mentioned, Penguin announced plans to release 50 enhanced e-books in 2012, up from the 35 released in 2011 (Alter 2012). Simon and Schuster are set to release 60 enhanced titles and in February, Random House will release a digital version of Katherine Boo's book *Behind the Beautiful Forevers* (2012). This is a story "about residents of a Bombay slum, that includes video of the central characters that was shot over three years", and Open Road Media are set to release an enhanced e-book by the young adult novelist Andrea Buchanan which will integrate music, video and illustrations (Alter 2012).

A relatively new publishing company which caused a stir at the 2012 Digital Book World Conference and Expo in New York is Booktrack. Founded in August 2011, Booktrack was started by a small team of technology specialists in New Zealand. The company

> represents a new chapter in the evolution of storytelling, and an industry "first" in publishing, by creating synchronized soundtracks for e-books that dramatically boost the reader's imagination and engagement. The company's proprietary technology combines music, sound effects and ambient sound, automatically paced to an individual's reading speed. (Booktrack 2012)

The layout is much the same as a standard e-book: there are no hyperlinks similar to those discussed in titles released by Atavist, nor are there videos or illustrations. Rather, after a reading speed test, music, ambient and sound effects are added to the reading experience, calibrated to match the average number of words per minute being read. The audio experience is not compulsory, and the reader is able to adjust the sound effects to his or her preference, for example choosing to switch "music" and "sound effects" off or listening only to "ambient". The standard options to adjust text size and font and change the background colour scheme apply, and – in what appears to be becoming a standard – there is also the option for readers to connect to Facebook. Booktrack has a variety of titles available from *Sherlock Holmes, The Ugly Duckling* and *A Christmas Carol* to the more contemporary *The Power of Six* by Pittacus Lore.

Although this is clearly an innovative project, the concept of incorporating a rich audio experience into a standard text e-book does not immediately seem avant-garde. If anything, I

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did not expect the experience of reading such a book to feel particularly atypical: the publishers have simply added sound effects similar to those that one might hear on television to a standard e-book reading experience. On the Booktrack website, though, the marketers promote the impact of individuals being able to immerse themselves completely in the story world, blocking out all external noise and becoming isolated or lost in the book (Booktrack 2012). To better understand the level of immersion that a sound experience can create, take as an example the following passage from the Booktrack edition of *Adventures of Huckleberry Finn*:

> Miss Watson she kept pecking at me, and it got tiresome and lonesome. By and by they fetched the niggers in and had prayers, and then everybody was off to bed. I went up to my room with a piece of candle, and put it on the table. Then I set down in a chair by the window and tried to think of something cheerful, but it warn't no use. I felt so lonesome I most wished I was dead. The stars were shining, and the leaves rustled in the woods ever so mournful; and I heard an owl, away off, who-whooing about somebody that was dead, and a whippowill and a dog crying about somebody that was going to die; and the wind was trying to whisper something to me, and I couldn't make out what it was, and so it made the cold shivers run over me. Then away out in the woods I heard that kind of a sound that a ghost makes when it wants to tell about something that's on its mind and can't make itself understood, and so can't rest easy in its grave, and has to go about that way every night grieving. (Twain 2011 [1884], p.8)

As the reader begins this passage, a banjo plays a simple tune quietly in the background. The reader hears the creaks of wooden floorboards as Huck walks up to his room. The sound of Huck sitting down in a chair by the window is distinct, at which stage ambient night sounds can be heard, especially the crickets. The reader listens to the gentle rustling of the leaves, the "who-whooing" of the owl and the "dog crying" in the distance (p.8). The wind slowly starts to pick up until it reaches the point where it starts to howl softly and all the while, the banjo continues with its restful, contemplative tune. These sounds would be evocative even on their own, but to listen to them while reading, coupled with narrative like "that kind of a sound that a ghost makes" (p.8), creates a superbly immersive experience; in fact, as the reader, it feels like you are in the room with Huckleberry Finn, experiencing everything with him as he experiences it. Visually, all the reader has is words, but especially in this historical novel, to

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hear the sounds of the wooden floorboards creak, the strike of a match as a candle is lit, or the Mississippi water lapping up against a barge is really quite a unique experience. In a recent interview, Booktrack's chairman, Derek Handley, said:

> Regardless of whether or not you are a traditionalist and think that the imagination should be left alone to visualise the book you are reading, it is an irrefutable fact that sound lifts and enhances all the senses and any experience. When sound is matched exactly to the pace you are reading – then it becomes an entirely new experience altogether; many people have called it a 'movie-book' experience. (Griffin 2012, n.p.)

New York Times bestselling author David Farland (better known as Dave Wolverton) is one of the senior partners at East India Press, mentioned earlier in this chapter as a "re-invented publisher for an evolving industry" (East India Press, 2011). East India Press was founded on 12 May 2011 and on the 27th day of the same month Farland released the first book in the *Nightingale* fantasy series as an app for iPad.

The novel contains a number of features, including graphic illustrations and original music at the beginning of each chapter, conversations with David Farland (a video at the beginning of each chapter features Farland discussing an aspect of the book, one of its characters, his research, and a number of other relevant topics) as well as a Facebook dialogue box that allows the reader instantly to post a comment to his or her own Facebook page, together with a link to the *Nightingale* webpage (Farland 2011). After reading the prologue of *Nightingale*, my own Facebook status reads:

> The prologue is so evocative: the eerie music together with sounds of barking mastiff's in the background ... completely new experience. It didn't take over from my imagination, but rather led it. I think the abstract illustrations work in this regard as well: not overthrowing the imagination, rather setting a scene for it to work within. (James 2012a)

In the prologue, the reader is introduced to Sommer Bastian, a woman from the "Masaak" race, who is racing "through a thick forest, gasping in the humid heat" (Farland 2011) as she is pursued by a pack of mastiffs. The music is a dramatic, ominous and eerie amalgam of ancient pan pipes and modern electronic sounds. From a distance the reader can hear the

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barking pack of dogs as they begin to close the gap on the terrified Sommer (Farland 2011). On page one of the prologue seven different abstruse illustrations frame the text. The top two illustrations depict Sommer running through the thick forest; the only movement on the illustration being the spectral glow of fireflies in the foreground (Farland 2011). The third is a moving illustration of a vicious-looking mastiff, complete with spiked collar and leather mask, running through the dark woods (Farland 2011). The remaining four still illustrations offer quick glimpses of the unfolding scene: Sommer on the ground surrounded by dogs; a close-up of her pained face; and her delicate hand's gothic black fingernails[5] (Farland 2011).

In chapter one the reader is introduced to sixteen-year-old Bron, *Nightingale's* hero. Bron is the child of Sommer Bastian, but the infant went missing shortly before Sommer's attempted escape, described in the prologue. It is not clear how yet, but Bron is living among humans in Utah and since he went missing as a baby he has been in the care of several different foster families. Some of the foster parents were abusive and others handed Bron back to authorities because they found him "strange" or "spooky" (Farland 2011, chapter two). The music at the beginning of chapter one is pensive, mournful almost, and the five illustrations depict Bron's latest foster home, where he is subject to abuse by his foster mother "Melvina Stillman" (chapter one). Like the opening page of the prologue, the opening page of chapter one includes a conversation with Farland, as well as a Facebook dialogue box. The video conversation with Farland is about the title of the novel, where Farland discusses brood parasitism[6] and uses it as a symbol for Bron (Farland 2011). Chapter one also introduces embedded author's notes, a feature not included in the prologue. For example, if the reader taps on the highlighted text, "Bron as her slave", the following author's note appears as a pop-up: "The character of Bron is based upon a dear friend, who was raised in foster care, and found that one family used her primarily as a nanny" (Farland 2011, chapter one). Certainly chapter one contains themes relating to abandonment and alienation, and the author's notes are brief additions that extract these themes from the narrative itself. Another note can be read when the reader taps the words, "He'd learned to feel nothing":

[5] It is only the first page of the prologue that contains original illustrations and music; the remaining six pages read as a standard e-book, free of embedded media or hyperlinks.

[6] Brood parasites, like the Nightingale, do not tend to their own eggs; they lay their eggs in the nests of a host species.

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> Bron suffers from emotional detachment disorder, a common ailment amongst children who have been raised as he has. Interestingly enough, I first learned about the disorder in a criminology class, when the professor discussed how the social system was “creating future criminals”. (Farland 2011, chapter one)

Still another example appears as an author’s note when the reader taps on “dumped into a new family”:

> Social workers talk a great talk about how much preparation children go through before they’re taken to a new family, but in talking to the children, they don’t see it that way. They almost always feel unprepared, as if they’re being “dumped off”. (Farland 2011, chapter one)

As a reader I enjoyed the author’s notes, but there are electronic literature commentators who are asking the pertinent question: to what extent do embedded media, such as the author’s notes in *Nightingale*, detract from the immersive experience of reading?

In “The Pleasure Principle: Immersion, Engagement, Flow”, Yellowlees Douglas and Andrew Hargadon discuss how digital texts affect a number of variables that contribute to enjoyment when reading (2000). According to their definitions, nascent forms of hypertext narrative were dependent on the reader making a number of decisions, mostly which lexia or link to click on (Douglas and Hargadon 2000, p.157). This requires a level of engagement that can prevent the reader from having an immersive reading experience, and according to schema theory, years of print-based literary reading have taught readers to savour this state of immersion (p.153). That is not to say that traditional paper-based reading cannot be engaging. Douglas and Hargadon use the example of James Joyce’s *Ulysses* suggesting that

> Joyce’s novel confronts readers with shifting perspectives and dramatic changes in voice, much of them experimental. Unlike most narratives, which set up dramatic tensions and then get busy resolving them, *Ulysses* focuses on only the dramatic tensions unfolding within a single day, bringing none to definitive closure. (p.155)

The reason for the authors classifying *Ulysses* as an engaging read is because it goes against the reader’s expectations; it does not comply with the usual patterns of narrative which,

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generally, readers have absorbed as part of their schemas or expectations. Another example might be when the hero of a film or novel expires long before the ending: the break from normal conventions is often enough to remove the reader from the historically enjoyable state of "immersion" (p.155).

In her seminal work, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, Janet Murray describes "immersion" as

> a metaphorical term derived from the physical experience of being submerged in water. We seek the same feeling from a psychologically immersive experience than we do from a plunge in the ocean or swimming pool: the sensation of being surrounded by a completely other reality, as different as water is from air, that takes over all of our attention, our whole perceptual apparatus. (1997, p.98)

With examples of earlier forms of hypertext narrative, such as Michael Joyce's *Afternoon, a Story* (1990), it can be argued that two critical components might possibly break a reader's immersive experience. First, given the date of first publication of *Afternoon, a Story*, readers of this fiction might not yet have been exposed to hyperlink frameworks. Douglas and Hargadon confirm that often, hypertext readers "have no similar history, no solid set of schemas to call on in building a meta-schema that lets them understand the text" (2000, p.157). Second, nascent hypertext fictions such as *Afternoon, a Story* and Stuart Moulthrop's *Victory Garden* (1992) are "postmodern in their content, tone, and treatment of narrative" (p.157). As a result, they cannot help "calling attention to and disrupting the schemas and conventions of print" (p.157). According to Douglas and Hargadon:

> Careful, close readings can identify these ... hypertexts as narratives that deliberately eschew realism as well as the usual fictional conventions, frustrating and blunting our expectations of continuity, causation, and the closure that neatly resolves the story's central tensions. (2000, p.157)

Commenting on *Afternoon, a Story*, Murray suggests that Joyce "is intentionally 'problematizing' our expectations of storytelling, challenging us to construct our own text from the fragments that he has provided" (1997, p.58). Early works of hypertext fiction necessitated a willingness to engage and an acceptance that the experience would not

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necessarily reward the reader with the immersive experience inherent in the formulas of print fiction. The fact that this form of postmodern fiction was packaged using a new technology further restricted the potential for an immersive reading experience, favouring instead the reader who was receptive to a challenging and engaging reading experience.

Douglas and Hargadon's concepts of immersion and engagement might profitably be applied to the latest developments in digital literature so that we may understand how reading within a digital environment can be as enjoyable as reading a traditional paper-based book. In the case of my own reading of *Nightingale* (Farland 2011), several points should be taken into consideration. First, as an individual who might be labelled a "digital native", I have developed a solid set of schemas which allow me to navigate several popular digital environments, including online multimedia spaces based on hypertext coding. Second, most of the latest enhanced e-books (and certainly those described in this chapter) cannot be described as postmodern, and do not attempt consciously to break what Murray would refer to as the "fourth wall": the boundary conventions that will prevent disruptions of immersive experiences with imaginary spaces (1997, p.103). Lastly, unlike Moulthrop's (1992) and Joyce's (1990) earlier works, the digital titles discussed in this chapter do not promote a "continual circling through a confusing and contradictory space" (Murray 1997, p.57).

In *Nightingale* (Farland 2011), the producers have purposefully presented music, illustrations and video conversations with the author at the *beginning* of each chapter. In all likelihood it must assumed that the reason is to prevent excessive media from detracting from an immersive reading experience. As mentioned in the previous chapter of this thesis, in my own reading of *The Picture of Dorian Gray* (2011 [1891]), I limited my "extraneous load" by searching for information relating to the novel only at the end of each chapter. Of course, in *Nightingale* (Farland 2011), access to the author's notes during the reading experience might be said to break the fourth wall. Strangely, this is not the case: the author's notes render Bron's experience more real, almost as if a parent or therapist is giving a wiser perspective as the protagonist's story unravels. In the author's note alluded to earlier, "Bron suffers from emotional detachment disorder, a common ailment amongst children who have been raised as he has" (Farland 2011, chapter one), notice how Farland describes Bron as an actual person; this is not the "character" Bron, it is an actual person like Bron and so rather than extracting the reader from a condition of immersion, the omniscience of the author's note actually starts to blur the line between what is real and what is fantasy.

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Murray's (1997) sentiments are that too much embedded media within a novel are capable of destroying "the transitional experience" (1997, p.100), removing the reader from the fantasy. One of the ways that Atavist has addressed this problem is with "in-line extras". Embedded media, such as photos, maps, notes, timelines and biographies can all be switched off for individuals who feel this media disrupts their experience. The reader decides – and ultimately it must be the reader's decision – what enhancements he or she would like. The same can be said of the Booktrack edition of *Adventures of Huckleberry Finn* (2011 [1884]): the reader has control over the sound balance; in fact if the reader so desires, he or she can turn all music, ambient and sound effects off completely. However, it must be reiterated that in this fledgling digital reading space – when it is done correctly – there are instances where the embedded media are capable of creating a heightened sense of immersion and engagement. In *My Mother's Lover*, while the narrative of the love story, of the death of Zahrt, and of Evelyn Jane's heartbreak, are all beautifully written, the oral history of Kishego injects a sense of stark reality into the "story". It brings the reader back to the substantive truth that while this is a love story, Zahrt really existed, World War II really took place, and millions of families and relationships were torn apart. The photos, maps, official documents and timelines contribute to the power of this effect, but Kishego's oral history and the accompanying video footage act as a forcible adhesive, bringing a historical story into the here and now.

Booktrack, Atavist and East India Press are all publishers that are less than one year old, but all three are allowing the reader to customise their reading experience: the reader has control over the balance of "traditional" and "digital" elements. Furthermore, although the package of the content is new, the cross-media technologies utilised are not: any experience with the internet, television, textbooks and video-documentaries allows for a seamless reading experience of the enhanced e-books discussed. Digital conventions are no longer outside of our schemata: twenty years worth of the digital revolution have allowed readers to build schemas granting them easy access to interact with these texts. In fact, given the evidence provided in Chapter Two of this thesis, it might be proposed that the pendulum has swung to the opposite extreme and that – for digital natives – the traditional paper-based book is losing traction with reading schemas that they have developed. Compared to the cyber-world – which has become frighteningly adept at mimicking reality – traditional books actually bring attention to the fact that they are only a story: in the face of fast-evolving media, books are losing their grip on the "enchanted threshold" (Murray 1997, p.103).

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In “Harnessing ‘e’ in Storyworlds: Engage, Enhance, Experience, Entertain”, Alison Norrington suggests that “using multiple platforms offers the potential to break the fourth wall (the invisible boundary that separates the audience from the characters)” (2010, p.101). An example is the e-book discussed earlier, *Chopsticks* (Penguin Group USA 2012), which tells the story of a “troubled young piano prodigy – using family photos, letters, documents, instant messages and YouTube videos” (Alter 2012, n.p.). Readers are also able to enlarge images, flip through photo albums, watch video clips, listen to the characters’ favourite songs and read their instant messages (Alter 2012). In fact there is almost no text at all in the novel, “save for scraps of dialogue mostly conveyed in handwritten notes and IM messages” (Alter 2012, n.p.). This novel, then, will mimic the environment of the digital native, who, in an online environment, scours different locations for pieces of information in order to form knowledge. In this environment, in order to gather information about a single, real-life person, an individual might perform a Google search (or a Google image search), view the person’s timeline on Facebook, investigate their professional networks via linkedin, view videos on YouTube and draw information from Wikipedia. Given that this is how the digital native gathers knowledge, as horrifying as *Chopsticks* might initially appear to book purists, it is not surprising that character development is something in which the reader will have a much more active role. Far from breaking the transitional experience, if anything, this type of engagement makes the novel seem more real. For example, the character has a Facebook page and the reader is able to view the character’s instant messages. This kind of reading experience is defined as a “transmedia story”: stories that have “complex, spider-web-like interactions that encourage exploration across mediums” (King 2011, n.p.). In other words, and according to Brad King, assistant professor and emerging media Fellow at Ball State University’s journalism department, transmedia fiction is where you “disassemble a story and place it in a lot of places” (TedxTalks 2010). Even Murray admits that the “limitless intersecting stories of the actual world” make single, linear stories less feasible (1997, p.38). Multiform narrative is much closer to the reality of the world in which we live, which is why an enhanced e-book like *Chopsticks* (Penguin Group USA 2012) may actually represent a more immersive reading environment for digital natives. We are becoming an active audience and even the Kindle, in collaboration with digital publishing house Coliloquy, has just released four serial interactive titles which allow readers to “choose a scenario or make a decision about how the story will go” (Owen 2012, n.d.).

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Although excited about the future potential of enhanced e-books, Janet Murray, ever the realist, explained in 1997 that "hypertext fiction is still awaiting the development of formal conventions or organization that will allow the reader/interactor to explore an encyclopedic medium without being overwhelmed" (p.87). More than ten years later, those conventions have still not been formalised: the digital environment has not been stable enough to allow for that. However, publishers at the forefront of digital literature are beginning to show signs of utilising a standard set of conventions to make the technology easier to navigate, and they will seek to create an environment that is as immersive as possible. In this digital reading space, the correct distance between the story and the reader is still being negotiated, with indications that the distance, especially for digital natives, is now smaller than ever. Digital natives no longer have the problem of gimmicky technology standing between them and the story-world: their ability to navigate cross-media environments with ease is allowing experimentation (with titles such as *Chopsticks)* but at the same time publishers are being careful to present literary works in such a way as to make it as easy for the reader as possible. In many instances, as has been discussed, the reader decides on levels of embedded media and interaction.

As a final word, it should be mentioned that developments in enhanced e-books during the last twelve months have been so rapid that even Evan Schnittman has conceded that his vehement opposition to enhanced e-books is redundant. In December 2011, just eight months after he said that "the idea of innovating in the narrative reading process is just another non starter", Schnittman advised that publishers "should offer 'enhanced hardbacks' with print and digital packaged together" (Campbell 2011, n.d.). The veteran publisher went so far as to close down his popular blog, "Black Plastic Glasses", conceding that digital is far from dead (Schnittman 2011).

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# CHAPTER FIVE

## Beyond the Paper-Tray:
## Full Participation in the Conversation of Mankind

It might be said that traditional, paper-based books are closed information environments. This "closed" characteristic becomes more pronounced as society at large consumes increasing amounts of information in digital, online environments: compared to the internet's amaranthine web of connected information, the technology of a book renders the information found within in it startlingly still, proud and disconnected. Where once it was unquestioningly asserted that this self-contained condition was a desirable feature of the product, there is enough evidence for it to be noted – at least in part – that the twenty-first century product must, more than ever before, respond to a changing technology and a changing reader, else not complain when it is described in elegiac tones. For readers outside of an authoritative literary theory discourse, technology should be making meaningful interaction with literary fiction easier. Whether we are students of the liberal arts or interested members of the reading public, we now have the opportunity to connect with readers via a digital reading space in which engagement with both the text and the paratext is rendered easier and more fluid. In this chapter, from a base that explores some of the concerns of digital literacy, I will start to imagine a model for a digital reading macrostructure[7] and interface design which seeks to address some of the challenges discussed earlier in this thesis. At the same time, my model seeks to take advantage, for strategic purposes, of the technologies that support multimodal formats.

For a variety of stakeholders – including academics, technologists, authors, readers and students – it should not be necessary to sideline more traditional reading concerns in order to create digital models of literary presentation. Surely many such stakeholders are ideally positioned to suggest what qualities of traditional paper-based literary reading have proven most valuable, and propose ways in which the digital space might harness and protect them. For example, if stakeholders agree that it is the reader's mind – and not hypermedia – that liberates the text from the confines of a fiction's bound cover, then how might the digital reading space realistically protect and enhance this condition? A balance needs to be sought,

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[7] In the context of this thesis, macrostructure refers to the overall architecture of a proposed digital reading product or experience, and the placement of features within it in order to achieve a specific set of objectives.

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though, and stakeholders – especially those of the "Birkertsian" ilk – have a responsibility to focus less on what has traditionally been engaging for them, and imagine instead what is going to engage the attention of the next generation of readers. Of course, over the last four decades, the "stakeholders", as I am referring to them here, have been attempting to re-imagine ludic reading as part of both a new digital reading space and, more recently, a new digital human. In the form of e-books, the process continues to grow and succeed (especially after the launch of Amazon's Kindle e-reader, as already discussed), but in most cases little or no change to the presentation of the literature has been achieved; titles have merely been transferred into an electronic document for digital consumption. In the form of hypertext stories, the aesthetics of literary presentation – as posited by Janet Murray – have been unable to shake off an avant-garde and postmodern affectation, leaving such works inaccessible to readers outside academia. It has become – to borrow a phrase used by American information designer Craig Stroupe – a "cultural and economic white elephant, an academic genre without a popular audience or market" (Stroupe 2007, p.426). More recently, literary apps for tablet computers have shown promising signs in the form of nonfiction titles such as those produced by Atavist, but effectively absorbing fictional works into the technology has been a real struggle.

However, this thesis will suggest that – for now – a revolution in the aesthetics of literary presentation need not take place in the form of reinvented stories or features built into the primary text itself. Rather, a literary macrostructure and strategic interface for digital reading spaces should allow the word to retain centre stage while concurrently incorporating combinations of media intended to make the word's coding more accessible, more interactive, and more appealing to the digital native. Such a macrostructure – opening up what I will refer to as "digital windows" – both inside and beyond the text, should ultimately create a fuller participation in the humanities-led conversation about the human condition.

Antecedent to a discussion of opportunities offered by a new strategic interface for digital literature, it is worth revisiting the idea of "digital literacy", and scrutinising its potential purchase on literary enrichment, education and information literacy in general.

Chapter Two of this thesis alluded to the proposition that as print's influence has been constricted, so the definition of the term "literate" has become increasingly unsteady. Mark Gibson points out that, in an environment categorised by multiple media, rather than referring

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to "literacy", it might be helpful to break this term up into a number of parts, such as "visual literacy", "critical literacy", or "media literacy" (2008, p.75). While Gibson's argument suggests there is no longer any single definition of "literacy", one of hypermedia's leading (and earliest) theorists, Richard Lanham, is more helpful in his definition, and how it might apply to the digital native. In a 1995 edition of *Scientific American*, Lanham argues that

> the word "literacy", meaning the ability to read and write, has gradually extended its grasp in the digital age until it has come to mean the ability to understand information, however presented. (cited in Dobson & Willinsky 2008, p.300)

In this instance, Lanham reinforces the idea that information is no longer dominated by plain text. In 1995 – at the time of Lanham's comment – television, radio and telecommunications were all ubiquitous, a nascent internet was at the beginning of ushering in a new information and communications technology revolution, and naturally, commentators were asking *how* this digital revolution would shape the future. Gibson, for example, has noted that "[o]ne of the attractions of the idea of 'digital literacy' is that it appears to hold some promise of a revival of educational optimism" (2008, p.74). Gibson's argument starts in an unusual place: the 2007 Federal Campaign in Australia where soon-to-be Prime Minister Kevin Rudd was campaigning for improved digital literacy (2008, p.74). Rudd was proposing a National Secondary School Computer Fund "to ensure access to a laptop computer for all senior secondary students in Australian schools" (Gibson 2008, p.74). Of interest is not Rudd's campaign, but the reaction to it by futurist Mark Pesce, who pointed to its possible significance: "Digital media should not be considered only in terms of their functionality; they also provide a focus for the reimagining of social relations" (cited in Gibson 2008, p.75).

It is easy to skim over the implications of Pesce's seemingly straightforward response to a 1997 election campaign in Australia, or discount it as an empty, generic comment. Perhaps this is because conversations around digital literacy tend to focus on the implications of changes to neural-cognitive pathways (or the "re-wiring") of the brain. Cultural theorists such as Steven Johnson (cited in Gibson 2008, p.76) suggest that "cognitive engagement" with digitally mediated popular culture has "made us smarter", and Gibson himself says the new digital environment requires individuals to "weigh evidence, analyse situations and make decisions with reference to long-term goals" (2008, p.77). To return to Pesce, however, the following question seems apposite: how will a re-imagining of social relations affect

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information literacy? Do digital media have the potential dramatically to change the relationship between academic and student, author and reader, the cultural centre and its periphery, establishment and non-establishment, and if it does, what impact will such shifts have? Indeed, will these shifts have a bearing on the study of literature? In a re-imagined digital space, will readers have easier access to classic works of English and other literatures, or, if digital media overtakes established modes of literary presentation, might canonical works become increasingly obscure?

In view of these questions, it is worth returning to George Landow's vision for hypermedia, in particular his notion that multimodal digital formats have the potential to revolutionise education by

> freeing students from teacher-centred classrooms, promoting critical thinking, empowering students, easing the development and dissemination of instructional materials; facilitating interdisciplinary work and collaboration, breaking down arbitrary and elitist textual barriers by making all text worthy and immediately accessible, and introducing students to new forms of academic writing. (1997 cited in Dobson & Willinsky 2008, p.289)

It should be mentioned that Landow's statement, published in 1997, assumed that only students would have access to a hypermedia environment designed to open up a much wider window of information. However, given the growth in ownership of tablet computers and e-reading devices, in 2012 (and via a strategic interface design) hypermedia has the potential to bring Landow's prophesies to an audience beyond the classroom, too. On *how* hypermedia will be able to achieve the potential that Landow proposes, Gary Heba argues that learning is best facilitated when a combination of media is used to engage the reader (in "HyperRhetoric: Multimedia, Literacy, and the Future of Composition", 1997, p.21). Writing is a "visual medium", but multimedia allows users to learn via seeing, hearing, reading, doing and simulating (Heba 1997, p.21). According to Heba, who is the director of scientific and technical communication at Bowling Green State University in Ohio, "the more senses stimulated, the greater the receptivity to and retention of information" (1997, p.33).

Of course, based on John Sweller's "Cognitive Load Theory" (discussed in Chapter Three of this thesis), researchers need to be careful about arguments suggesting that *more* media is

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automatically better (although Heba uses the word "combination" and not "more"). For example, Dana Gioia, chairman of the National Endowment of the Arts in the USA, in all likelihood would respond to Heba's assertion ("the more senses stimulated, the greater the receptivity") by suggesting that

> [m]ost electronic media such as television, recordings, and radio make fewer demands on their audiences, and indeed often require no more than passive participation. Even interactive electronic media, such as video games and the Internet, foster shorter attention spans and accelerated gratification. (National Endowment for the Arts 2007, p.vii)

It might be argued that the above statement falls into a "declinist narrative of conservative polemics, according to which contemporary culture is sliding towards a maw of immediate gratification and mindless entertainment" (Gibson 2008, p.78). This "declinist narrative" argues that in cases where digital natives are engaging with a digital reading space, that space tends to condense language to make it more accessible, as if print has had to dumb down in order to compete with more popular media. As part of her proposed model for a new writing space, Jean Mason interviewed writers about their attitudes towards writing in the online space and found that her informants "began to question the role of words" (2002, p.5). One informant said that when she hyper-writes, "words are the last element she considers whereas in traditional text they are the first" (Mason 2002, p.5). The same informant emphasised her tendency to avoid complex sentences in the digital space and to accept incomplete sentences (Mason 2002, p.5). Another informant explains how he went to great lengths to minimise words and, according to Mason, his primary concern was "how the page looks rather than the content it contains" (Mason 2002, p.5).

There should also be heedfulness about the "associationist argument" circulated by the early champions of digital media who suggested that hypermedia "was destined to improve comprehension and motivation because it mimics the associative processes of the mind" (Dobson & Willinsky 2008, p.291). As Dobson and Willinsky note, there is little evidence to support associationist arguments (2008, p.291). It is helpful, though, to think carefully about interface design, in particular how a strategic interface might be designed to support Landow's objectives for a hypermedia environment (critical thinking, empowered readers, facilitated interdisciplinary work and introductions to new forms of writing). More

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specifically, how might literary interfaces be designed with the right balance of navigational openness (exploration) and "closedness" (hierarchy or linearity)? Although this thesis argues that a digital reading space promotes an information environment that is open, technology must also be able to guide the reader and prevent him or her from getting lost in a framework which, more often than not, has no boundaries.

In the context of a discussion on digital literacy, it is important to concede that digital natives are not, by default, more digitally literate than people who did not grow up with sophisticated information and communication technologies. In *Towards a Theory of Digital Literacy: Three Scenarios for the Next Steps*, Aharon Aviram and Yoram Eshet-Alkalai comment on Eshet-Alkalai's proposed conceptual framework for digital literacy. This framework isolates five types of literacy skills: "(a) photo-visual literacy; (b) reproduction literacy; (c) information literacy; (d) branching literacy; and (e) socio-emotional literacy" (2006, p.2). In their own study, which sought out to measure digital literacy in individuals of all ages, Aviram and Eshet-Alkalai found that younger participants displayed greater levels of aptitude in photo-visual and branching literacy skills (2006, p.3). However, older participants were more adept in tasks that investigated reproduction and information literacy (p.3). In other words, digital natives were found to be lacking in skills necessary to "create new meanings or new interpretations by combining pre-existing, independent shreds of information in any form of media" (p.3). They were also less able to assess information by sorting out subjective, biased or even false information (p.3). While Landow might imagine a classroom which is not teacher-centric, Aviram and Eshet-Alkalai's study prompts us to remember that a "guide" is necessary to impart certain skills, among them the ability to assess the reliability of information, as well as the ability to form cohesive meaning from a variety of legitimate sources. Technology might be capable of imparting these skills, but only insofar as the interface design has taken them into consideration.

It is likely that electronic fiction innovator Stuart Moulthrop would agree that certain skills central to information literacy are declining among digital natives. However, this would not prevent his argument in favour of "digital" over "print" from being one of the strongest of them all. Moulthrop suggests that traditional literary studies leave little room for active participation and, as a result, very few students are able to interpret a text: they are locked outside of it (Moulthrop & Kaplan 1991, p.10). Once again, as the wheels of the digital

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revolution turn and digital natives interact with other mediums, the closed condition of literary fiction becomes more apparent. Moulthrop claims that

> exclusion from authoritative discourse all too often deflects students from real engagement with texts, denying them full participation in what Bruffee terms "the conversation of mankind". (Moulthrop & Kaplan 1991, p.10)

In essence, Moulthrop is arguing that literature has excluded itself from the process of a democratisation of information made possible by digital environments. According to Dobson and Willinsky "much is made of the democratic qualities of digital literacy because it affords greater access to knowledge as well as the ability to speak out and make one's views widely available" (2008, p.286). The authors go on to say that "certainly [digital literacy] carries with it the potential for a far wider, more global access to knowledge" (2008, p.286). It goes without saying that search engines, newsfeeds, social networks and online encyclopaedias have made an infinite amount of information available to the general public, and that information can be accessed in a matter of seconds. But in the context of print literacy (especially in the literary canon) the reading public are often excluded from what Moulthrop and Kaplan refer to as "Authoritative Literary Theory Discourse" (1991, p.15). Traditionally students have been passive receivers of an authorised canon. However, in their own research, Moulthrop and Kaplan note that

> what we and our students discovered in working with interactive fiction suggests that this form of writing helps engage students in an encounter with literature, raising the possibility of a new community of critical and creative discourse. (1991, p.8)

Moulthrop and Kaplan go on to say that "[i]nvolved and enfranchised students will find themselves rethinking their relationship with literature" (2008, p.15).

It is Heba (1997) who refers to open versus closed multimedia environments, and Moulthrop, Kaplan and Landow are all implying that elements of academia not well disposed to digital environments might continue to lock students into the physical confines of books – despite the fact that technologies exist which offer opportunities for a richer, more engaging reading environment. While it has been purported that this "closed" environment promotes less strain on a reader's cognitive load (and therefore, improved comprehension), I cannot help but

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recall my own experience of reading *The Picture of Dorian Gray* on my iPad tablet, where an open environment (albeit one that lacked guidance) allowed me to follow a weaving journey in and out of the primary text. Heba notes that while the experience of multimedia can be more "chaotic ... [it nevertheless might appeal] more to a rhetoric of exploration" (1997, p.22). Heba goes on to say that a hypermedia environment should have the potential to open up ideas through a process of information layering, such as "thickening the description with annotations", "adding perspectives and points of view", and "slicing through the layers ... [to allow] unique and even surprising ways to link material" (1997, p.39). The point, of course, is to "develop content in a way that has the potential to open multimedia as a technology of discovery" (Heba 1997, p.39).

In 2006, during my own English Literature honours course, secondary readings and critical essays were selected by the course administrator or lecturer and left, as hardcopies, in a paper tray. After reading a primary text, say *Jane Eyre* (2000 [1847]) by Charlotte Brontë, students would refer to a "secondary readings" list. Outside the administration office, we would look for the paper-tray entitled "Feminism – Honours", and page through the muddled papers in search of a chapter from the seminal work *The Madwoman in the Attic: The Woman Writer and the Nineteenth-Century Literary Imagination* by Sandra Gilbert and Susan Gubar (2000 [1979]). We would then photocopy the essay and return it to the paper-tray. I remember reading the essay at home with a pen and highlighter on my lap, annotating accordingly so that I would be prepared for a discussion during the upcoming seminar. More than twenty years before then, one of the earliest examples of the use of hypermedia in an educational setting was being tested at Brown University in the USA. It was called Intermedia™, and was designed as an extensive hypertext system intended to facilitate the teaching of literature courses (Dobson & Willinsky 2008). The Intermedia™ software allowed literature students to access primary and secondary literary materials on a network where they were able to engage and participate by leaving comments and adding texts and links related to a particular work (Dobson & Willinsky 2008). Students were connected to a digital environment in which they could go beyond the limited, physical space of the classroom, and beyond the pre-selection of works left in the paper-tray, into a much bigger space where the possibility of new levels of engagement existed.

Intermedia™ was pioneering in the 1980s, but at the time the internet was still in its infancy, few individuals had access to their own personal computer and, of course, the invention of e-

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readers and iPads was more than a quarter of a century away. In 2012, though, some of the original conceptions of Intermedia™ for literature, the humanities, academia and literary reading in general, no longer need remain quiescent. In fact, now that the tools and infrastructure are available, we should be thinking about how literary works in a digital reading space might be packaged more effectively to enrich the reading experience. More specifically, for literature presented digitally, we should be asking: what vectors of information can be integrated into a macrostructure or strategic interface so that a combination of media dramatically improves a reader's engagement and understanding of that work, as well as the relevance and importance of the work?

In Chapter Six, I build on the initial promise of Intermedia™ by describing, in detail, how a strategic interface design might address, among other things, the four primary concerns posited in Chapter One of this thesis, namely how a new aesthetic of literary presentation might: (1) stimulate renewed interest in the humanities and liberal arts; (2) reinstate fiction as one of the central components in the education process; (3) recapitulate works of fiction that have become increasingly obscure over time or inaccessible to young people; and (4) "de-parochialise" what one might call "local" literatures within an increasingly globalised reading environment. I will use two literary works as specific case studies and present a blueprint based on what I have referred to as "digital windows". For now though – as an introduction to that blueprint - it is worth imagining some of the possibilities, and a good starting point is the literary classic, *Wuthering Heights* (1992 [1847]), by Emily Brontë.

Emily Brontë died in December 1848, almost a year exactly after the first printing of her only novel, *Wuthering Heights* (1992 [1847]). The second edition was published posthumously, and was edited by her equally famous sister, Charlotte Brontë, who provided a preface to that edition (Brontë, 1992 [1847]). In the preface, Charlotte remarks that *Wuthering Heights*

> was hewn in a wild workshop, with simple tools, out of homely materials. The statuary found a granite block on the moor; gazing thereon, he saw how from the crag might be elicited a head, savage, swart, sinister; a form modelled with at least one element of grandeur – power. He wrought with a rude chisel, and from no model but the vision of his meditations. (Brontë 1992 [1847], p.24)

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Imagine this as a quote that floats across the reader's screen even before he or she turns to page one of the novel. Then, there might be four options: (1) Watch a short documentary on the famous Brontë family; (2) Read selected extracts from Winifred Eveleen Gérin's *Emily Brontë: a Biography* (1971)*;* (3) Read Charlotte Brontë's full preface to the second edition (1992: [1947]); and (4) View Sam Taylor-Wood's photographic series, "Ghosts" (Taylor-Wood 2008), inspired by the location of *Wuthering Heights.* I am expressly interested in the last option imagined here, not least because most readers will attest that the imagery lent to *Wuthering Heights* (Brontë 1992 [1847]) by its location in the Yorkshire Moors is central to the novel's gothic temperament.

Taylor-Wood has become one of England's most accomplished visual artists and is one of a group of artists known as the "Young British Artists" (YBAs) who first started to exhibit together in the late 1980s. After reading *Wuthering Heights*, Taylor-Wood said:

> Reading it made me want to get up there on the moors, with my camera, to experience the wild landscape, which was the only thing that felt redemptive in the whole novel. I wanted to feel the turbulent emotional weather of that book and the harshness of the landscape that had inspired [Brontë] ... *Wuthering Heights* is one of those books on a list of books that you should read in your lifetime. It is amazing when you read it that there is not one redeeming feature about any of the characters. It is just unremitting pain and relentless torture of each other throughout. I was amazed at how Heathcliff has become such a romantic figure. There is an underlying, burning passion and love that holds them together, even though it is projected in pain and misery. But within the constantly sadistic relationships and the unremitting cruelty I was trying to find in my pictures some sort of redemptive quality in that landscape, as well as capture the bleakness that those characters are set against in Brontë's novel. (Taylor-Wood 2008, n.p.)

At *The Independent Online*, Taylor-Wood's "Ghosts" series can be viewed as a gallery, accompanied by the artist's notes. As an example, under a photo of two leafless trees, Taylor-Wood remarks:

> This picture of two leafless trees is one of the ones I call "Cathy and Heathcliff" to myself – for obvious reasons. It feels like their roots are intertwined and they are

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> inhabiting the same land. But everything is rumbling on beneath the surface and those two solitary figures are standing opposed to each other. (Taylor-Wood 2008, n.p.)

Having travelled to the Yorkshire Moors myself (and residing in the northern English city of Leeds for a number of years), I do not vilipend the experience of the reader who has not travelled to the Moors; rather I regret that he or she has read *Wuthering Heights* without an intimate understanding of the extremity of that landscape and its people. It is a landscape not unlike South Africa's Karoo; not in make-up, rather in its stark and empty eeriness. In my memory, the wind is bitingly cold and unrelenting, the land so unsheltered that few trees appear on the vista, and in fact, even today, the Moors are relatively empty save for the occasional farmhouse or hamlet. The prospect of the reader being able to navigate from *Wuthering Heights* through to the "Ghosts" (Taylor-Wood 2008) exhibition is made more appealing by the fact that there are no depictions of characters, or buildings: Taylor-Wood is simply capturing the feeling of a landscape (I can imagine something equally as evocative, and haunting, embedded within a enhanced version of Laurence van der Post's *The Lost World of the Kalahari* [1958] or even John Fowles's *The French Lieutenant's Woman* [1971]). In her preface to *Wuthering Heights,* Charlotte Brontë shares her own concerns about the possibility that immersive reading may be stymied by a reader's lack of context:

> The wild moors of the North of England can for [strangers] have no interest: the language, the manners, the very dwellings and household customs of the scattered inhabitants of those districts must be to such readers in a great measure unintelligible … (Brontë 1992 [1847], p.24)

Award-winning British filmmaker Andrea Arnold produced a cinema adaptation of *Wuthering Heights* in 2011 and, in the trailer alone, which contains less than ten words of dialogue, she is able to evince a picture of the Yorkshire Moors that is quite beautiful in its simplicity (Indieculturebox 2011). Apart from the lack of dialogue, there is also no music: just the sound of a "wuthering" wind, relentless rain and a few spectral-sounding marshland birds. The scenes are sliced together astringently, from a grass line view of the heath on the Moors, and the craggy valleys, to the Yorkshire stone of an old farmhouse set against a squally backdrop, and the vision of an occasional face lit up in part by candlelight. It is no wonder that at the 68th Venice International Film Festival Arnold won the Golden Osella for Best Cinematography. In a video interview, Arnold comments that she is obsessed with

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cinema and images and so she tries to rely as little as possible on dialogue, instead allowing the imagery to evoke the extraordinary horror of this gothic tale (Labiennaletv 2011). An interface designer or production team might decide to allow the reader to purchase Arnold's *Wuthering Heights* online once she has completed reading the novel, but perhaps, after the first chapter, the designer might also decide to give the reader the option to view Arnold's exceptional 30-second summation of *Wuthering Heights,* helping to immerse readers familiar with neither England nor the Yorkshire Moors.

Arnold's cinema adaptation of *Wuthering Heights* includes British folk rock band Mumford and Son's original song, "The Enemy", which was written specifically for the project. The banjo and mandolin are the only instruments playing as the band delivers its interpretation of Heathcliff's message to Catherine:

> Give me hope in silence
> It's easier; It's kinder
> Tell me not of heartbreak
> It plagues my soul, it plagues my soul
> We will meet back on this road
> Nothing gained, truth be told
> But I am not the enemy
> It isn't me, the enemy
>
> But I came and I was nothing
> And time will give us nothing
> So why did you choose to lean on
> A man you knew was falling?
>
> And bury me beside you
> I have no hope
> In solitude
> And the world will follow
> To the earth down below
>
> But I came and I was nothing

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And time will give us nothing
So why did you choose to lean on
A man you knew was falling?
(Ashpants686, 2012)

As a young *Wuthering Heights* reader, imagine the novelty of a digital window that takes you from the primary text to a video of a contemporary music act performing "The Enemy". Imagine the possibilities from there: a video of one of the band members discussing his interpretation of *Wuthering Heights*; a discussion with the band members on why they think the novel is still relevant; and allowing each band member to discuss which classic works of fiction they think have inspired their music.

Whether reading Taylor-Wood's comments on each of her "Ghosts" series photographs (and then leaving our own comments), reading a critical analysis of Charlotte Brontë's preface to her sister's only novel, viewing a 30-second video interpretation of *Wuthering Heights* by an award-winning cinematographer, or listening to the lyrics and music of a British folk rock band, there are a number of ways that – in the digital reading space – a novel can be opened up beyond the logocentric, and into a new space that has relevance to the context and learning style of digital natives. A combination of digital windows allows the reader paths in and out of the text, but all the while the primary text remains the centrepiece. The wild moors of the north of England, the dialogue of the nineteenth century protagonist, and the gothic imagery of an epic love story need not remain "unintelligible" to Brontë's twenty-first century digital native readers.

In the context of a discussion imagining some of the possibilities of a new form of literary presentation, let us turn our attention to the South African novel by J.M. Coetzee, *Disgrace* (2000 [1999]). This is the story of David Lurie: an aging, white, English-speaking professor, living in Cape Town, who enters into an affair with a student much younger than him, a student who happens also to be "coloured" (Coetzee 2000). After an investigation into the affair by the college, in which Lurie refuses to atone, he uses his temporary suspension as an opportunity to travel to his daughter's farm in the Eastern Cape where he plans to work on writing his opera, which is inspired by the Romantic poet Lord Byron, and told from the perspective of Byron's mistress, Teresa (Coetzee 2000). For non-South Africans who are interested in the shifting politics (and conditions) of post-apartheid South Africa, this should

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be a relevant novel, but how is a member of the British reading public to understand the complexities of South Africa's "coloured" identity? Without an understanding of apartheid, how is that reader to understand the network of racial power dynamics that are so central to an understanding of *Disgrace*? Even more challenging, how does a reader outside of the South African context empathise or connect with the aging, white intellectual male in that country? These questions led South African-born academic Andrew van der Vlies (2010) to write a book dealing with the setting and references of *Disgrace*. Van der Vlies, a senior lecturer at Queen Mary College in London, found that his students lacked the necessary background knowledge to engage properly with the text:

> I felt British students needed more context than they had immediate access to (or were willing to find for themselves) in order to engage meaningfully with the book. Most tended to read it fairly superficially. Not all thought sufficiently about the narrative perspective, for example. So, on the one hand, this book tries to offer a concise and accessible introduction to the novel and its contexts without over-simplifying – or telling the reader what to think (though it's not aimed exclusively at non-South Africans). On the other hand, it also presented an opportunity to offer some of my own critical analysis. This is a reader's guide in a series aimed at students and the general reader, but it also offers *bona fide* literary-critical analysis along the way. (cited in Jacobs 2010, n.p.)

Reading *Disgrace* in a digital space, it should be possible for the British reader to click through to an online environment where he or she might interact with a South African reader, in a "South African Literature", or more specifically, a "J.M. Coetzee" forum group (from a pedagogical point of view this is closer to the idea of Brown University's Interface™). The South African reader might be an academic who is interested in the triumvirate relationship between Coetzee (as the author), his narrator and his protagonist. Nowhere is that dynamic more interesting than in Coetzee's memoirs, *Boyhood: Scenes from a Provincial Life* (1998) and *Youth* (2002), which the academic might recommend to the young British reader. Of course, the British reader might not be looking for that level of critical analysis, and so might engage another South African reader in the forum: a black female student who is critical of the idea that Coetzee's post-apartheid "summing up" of South Africa is cynical and full of dejection and, "in her opinion", literature like this does little to represent the newfound optimism within what she sees as a much more racially integrated South Africa.

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Digital windows which offer the reader instant access to the ideas of other readers are especially relevant to local literatures. Where *Wuthering Heights* at least makes up part of a collective literary imagination, *Disgrace* charts fringe territory that might be made more relevant to Americans or Europeans if those readers had access to a combination of digital windows and tools capable of "[engaging] them meaningfully", as Van der Vlies says. It is not out of the question to postulate that a new, strategic interface for literature opens up the possibility for cross-continental academic literary courses, where two literature classes study literary works, while interacting via the macrostructures provided in those digital books. Perhaps a university class in India as well as a university class in South Africa would both study Arundhati Roy's *The God of Small Things* (1997) and Coetzee's *Disgrace* (2000), opening up a whole new level of cross-cultural literary interactivity: from interactive discussions, to the posting and reading of each other's critical essays. The interface may include embedded videos, including Roy's lecture, "Capitalism – a Ghost Story" (SatyenBordoloi 2012) presented as part of the 4th series of lectures under the Anurahda Ghandy Memorial Trust Lecture, or a video of J.M. Coetzee reading a passage from *Disgrace.* There might also be – for the benefit of students on both continents – a video of a professor introducing Romantic poetry as a genre and Lord Byron as an historical figure. An audio file might include Hollywood actor, John Malkovich, who plays David Lurie in the 2009 film adaptation of *Disgrace*, reading a selection of Byron's poetry.

I have tried to provide imaginings of a selection of what I have termed "digital windows" that would allow the reader in and out of the text. I have intentionally stayed away from discussing – at this point – functionality that may be construed as gimmicky, but there are a number of possibilities. The reader of *Wuthering Heights* should be able to share his own Heathcliff lyrics, or even download the latest Mumford & Sons album directly onto his e-reading device or tablet. There might be an option to download Taylor-Wood's "Ghosts" series as screensavers for the e-reader or tablet. Further, if the reader has shown interest in digital windows that open up literary theory, she might be asked if she would like to subscribe to a suggested blog or literary journal. Lastly, at the end of the novel, the device should be able to suggest to the reader novels or books that he or she is likely to enjoy next. Readers of *Disgrace* may be interested in more J.M. Coetzee novels, or even novels of a similar genre, such as Andre Brink's *The Rights of Desire* (2000) and *Before I Forget* (2004), Shaun Johnson's *The Native Commissioner* (2006) or Damon Galgut's *The Good Doctor*

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(2003). Alternatively, a window may ask, "Are you interested in reading recent novels by black South African writers?" in which case, K. Sello Duiker's *Thirteen Cents* (2000), Phaswane Mpe's *Welcome to our Hillbrow* (2001), and Sifiso Mzobe's *Young Blood* (2010) might appear as suggestions.

There are those who might criticise the interface imagined here as merely a system of "fancy footnotes". Of course, footnotes in traditional, paper-based reading remain as plain text and are limited to explanatory micro-notes at the bottom of a page or, worse, at the end of the text, as endnotes. The interface that this paper proposes employs a combination of media to open up useful information channels for the benefit of the reader. Stroupe refers to it as "writing culture" which he defines as "a way of knowing the world that depends upon textual elaboration – and the kinds of critical or creative consciousness enabled by its production and reception" (2007, p.422). In other words, a literary work's capacity to enrich an individual's understanding of the world (his or her schemas) can be improved if a macrostructure exists that can support greater access to the relevance of that literary work. Perhaps it is ironic that I have borrowed the phrase "writing culture", but if we take the phrase to refer to a work's satellite media, and the capacity of that media to "mediate" journeys that might add to a reader's understanding, then such a concept does become helpful.

While the term "strategic interface" has been used in this chapter, it should be noted that the proposed model is not a new form of media; it merely suggests how to effectively repurpose old media in order to address a number of concerns, including the declining rate of literary reading. Heba argues that multimedia

> enables mass repurposing of all available technologies of communication – speech, gesture, writing, video, audio and film within a single communication environment – and mass repurposing of all communicative literacies, as well. (1997, p.20)

What has been discussed in this chapter is the possibility of creating an instructional interface or macrostructure that repurposes media so that all readers might have better access to literary works. To borrow Moulthrop's (1991) terminology: how can literature be repackaged in the digital age so that it might use a combination of media to contribute to, and join in with, the democratisation of information?

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However, the phrase "democratisation of information" – used in the context of literary works – implies that the literary establishment will, by default, have less control over the information attached to a given primary text. Further, if an entire production team is working with an author to build an interface for his or her work, a new problem arises: *who* is it that is designing the digital macrostructure for a particular fiction? Take as an example Chimamanda Ngozi Adichie's *Half of a Yellow Sun* (2006), a novel that explores the tribal conflict (as well as the international response to that conflict) in Nigeria, and conditions which led to the establishment of Biafra in 1967. If Adichie's novel was repackaged to include a strategic digital interface, whose historical and socio-political interpretation would be propagated? Would there be a way to regulate the overall objectivity of the "writing culture" that surrounds a primary text? Would Adichie allow her production team to include a link to an essay that is critical of her novel?

Perhaps, as the digital literary space evolves, readers will come to trust specific production companies, who will have earned that trust by repackaging literary fiction in a way that is responsible, sensitive and objective. Perhaps publishing houses will employ a team of academics, including literary theorists, historians and philosophers, who will act as the new "gatekeepers", barring from the public domain work that is deemed unreliable. Ultimately, a new interface comes with a set of risks, and these should be given serious attention, but first let us arrive at a place where the digital native is engaging with literary works again, whatever the risk.

In Atavist's version of *My Mother's Lover*, discussed in Chapter Four of this thesis, it is the reader who chooses whether or not she wants to see the macrostructure: it is her choice to activate the "in-line extras" which open up new layers of media and meaning. There are some words that I, personally, would not want a digital macrostructure to distract from. For example, Damon Galgut's *In a Strange Room* (2010a) is a novel that is largely about the politics and place of a single person's mind: being trapped in the confines of the words is like being trapped inside the protagonist's mind, and being let out of the internment of that space would, I think, rob the prose of its power. However, if I had had the option, at the end of that novel I would most certainly have listened to a radio interview in which Galgut explores the question: where does memoir end and fiction begin (Galgut 2010b), and I would have been most interested to receive recommendations of writers who are interested in that same dynamic. However, from the beginning, it should be my choice – as the reader – what

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combinations of media I want to engage with, and what journeys of discovery I want to go on. I should be able to decide on the extent to which my digital reading space is open or closed.

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# CHAPTER SIX

## The Grass in Singing, *Online*:
## A Strategic Interface for Enhanced Literary Works

Doris Lessing, author of *The Grass is Singing* (1994 [1950]), would almost certainly balk at the idea of creating an on-screen version of her fiction. In her 2007 Nobel Prize for Literature acceptance speech, Lessing stated that

> [w]e are in a fragmenting culture, where our certainties of even a few decades ago are questioned and where it is common for young men and women, who have had years of education, to know nothing of the world, to have read nothing, knowing only some speciality or other, for instance, computers. (Lessing 2007, n.d.)

Lessing goes on to describe the "inanities" of the internet and our foolhardiness in accepting the digital revolution so blindly (Lessing 2007, n.d.).

I first read *The Grass is Singing* in 2010, in its paperback form (although in January 2012 the title became available as an e-book for Amazon's Kindle). The novel was written in Southern Rhodesia (now Zimbabwe) not long before Lessing emigrated to England in 1949, where she would soon find a publisher. Born in Persia in 1919 to parents who had left England after the Great war "to pursue a freer, less constrained life", Lessing moved with her family to Southern Rhodesia when she was six years old, where her father "invested all his capital, securing a large tract of land, 3,000 acres, and a very small house in Africa" (Rowe 1994, p.1). In total, Lessing spent 24 years in the British colony of Rhodesia, which is where *The Grass is Singing* is set and where it was originally penned.

The novel begins, retrospectively, with a newspaper clipping:

> MURDER MYSTERY
> *By Special Correspondent*
> Mary Turner, wife of Richard Turner, a farmer at Ngesi, was found murdered on the front verandah of their homestead yesterday morning. The houseboy, who has been arrested, has confessed to the crime. No motive has been discovered.

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> It is thought he was in search of valuables. (Lessing 1994 [1950], p.9)

The narrative proper then commences:

> The newspaper did not say much. People all over the country must have glanced at the paragraph with its sensational heading and felt a little spurt of anger mingled with what was almost satisfaction, as if some belief had been confirmed, as if something had happened which could only have been expected. When natives steal, murder or rape, that is the feeling white people have. (Lessing 1994 [1950], p.9)

Beginning at the end, so to speak, Lessing's first novel is a telling of the events and circumstances, spanning a lifetime, that lead to the premature death of Mary Turner at the hands of her black "houseboy", Moses. While the novel was written 40 years prior to the independence of Zimbabwe, *The Grass is Singing* has an openly satirical approach to the racial injustices of southern African society and was remarkably prescient of the large-scale violence that would eventually play out in that country as a result.

Several months after reading *The Grass is Singing* I happened across *The Last Resort* (2009) by Douglas Rogers (still only available as a paperback edition). Rogers is a journalist, originally from Zimbabwe, who has since settled in America. His memoir focuses on his parents, who own a game farm and lodge in the eastern highlands of Zimbabwe, which they successfully ran as a tourist destination during the 1990s (Rogers 2009). The lodge is called "Drifters" and becomes one of the most popular backpacking destinations in Zimbabwe, until shortly after the Millennium, when political instability and violence bring most sectors of the Zimbabwean economy to its knees (Rogers 2009). The ruling political party in Zimbabwe, ZANU-PF, led by Robert Mugabe, embark on a land-reform programme that culminates in the confiscation without compensation of white-owned Zimbabwean farms (Rogers 2009). This operation is on-going, even as I write this thesis, and *The Last Resort* is an account of Rogers's parents' attempts to maintain ownership of their farm and remain in their home (and homeland). The story of the victimisation of white farmers in a former British colony, as told by a self-exiled white Zimbabwean, can present a number of obstacles, but throughout Rogers has attempted to frame the politics of the story in a balanced way and from a variety of perspectives: the illegal diamond trader, the land invader, the ZANU-PF militiaman as well as the black, Zimbabwean farm-worker.

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I concluded the previous chapter by arguing that control over the connectedness of an online literary narrative should remain with the reader. I have begun this chapter with *The Grass is Singing* and *The Last Resort* because it was here, with these two texts early in 2010 that I found myself thinking: "I want more information, instantly. I want the option of a more involved journey with these literary works."

Lessing's classic had reignited my interest in colonialism's legacy, and the land reformation policies that came into effect in Zimbabwe in the early twenty-first century are a direct response to the iniquities of British colonial policies in Lessing's Southern Rhodesia. In reply to Mary Turner's xenophobic self-righteousness, her abused "native" houseboy's revenge was limited to a personal attack on his "madam". Fast-forward 60 years, and the collective wrongs wrought on blacks in Rhodesia by white colonial settlers are reprised on a much larger scale. In my reading of Lessing's novel I had found potential answers (or at least attempts to better "frame" the historical context) to some of the problems put forward in Rogers's memoir, and vice versa.

However, perhaps because of my personal condition of being always "connected", I found that in both literary works I was craving the ability to hyperlink out of the prose and into bits of information that would add to my understanding and satiate my curiosity. In the context of my own readings, I found myself asking questions like: (1) Who is Doris Lessing that, as a young, white colonial woman, she had such a progressive view on race politics in Southern Africa? (2) Who was "Lobengula", and how did Cecil Rhodes effectively disenfranchise both him and his people at the end of the nineteenth Century? (3) In her final days, as she descends into psychosis, does Mary Turner have sexual relations with her "house-boy" – was that a detail that I missed? (4) How is it that Mary Turner knows about her impending death?

In Rogers's memoir, inherently more fact-based and current, it was more apparent to me – as the digital native reader – that I was disconnected: show me a video of Robert Mugabe speaking about land reform; provide me with an audio of a disenfranchised white farmer's account of how he or she was thrown off the land; allow me a link to see photographs of Drifters game farm and lodge and provide me with a link to a Facebook group where I can interact with the author, as well as other southern African readers.

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How might these two literary works, then, if they were to be digitally repackaged, stimulate renewed interest in the humanities? How might they reinstate fiction as one of the central components in the education process? How might they recapitulate the classic *The Grass is Singing* or make Rogers's *The Last Resort* more appealing to a wider audience that includes the digital native? How might we take these two literary works, whose subject matter rests in a very specific culture on the periphery of the global mainstream, and make them more accessible to a transnational audience? Finally, perhaps the most pertinent question is to ask how literature might use what Lessing would see as its enemy – the digital interface – to re-engage meaningfully with digital natives.

In what follows, I provide an operative model which attempts to demonstrate the experience a reader might have with a digital version of Rogers's *The Last Resort* and Lessing's *The Grass is Singing*. The concept of a digital interface – complete with digital windows – which is designed from the outset with specific objectives in mind, will be hypothesised. It is worth bearing in mind that I have divided this chapter into three parts. First, I return to a discussion of what appear to be some of the more effective design elements already in use in the digital reading space. Second, I discuss – in practical terms – how *The Last Resort* and the *Grass is Singing* might function in an enhanced, digital reading space. Third, based on the operative, enhanced model so proposed, I discuss how this thesis's vision for an enhanced reading product addresses a number of the theoretical possibilities and concerns raised in previous chapters. As a final point, it must be clarified that what follows is entirely hypothetical, and presumes that such a project would require, as a fundamental prerequisite, author consent.

Before discussing the possibilities of digitally packaging *The Last Resort* and *The Grass is Singing*, a brief return to the topic of hypertext is warranted, so as to reiterate those elements of interface design which appear to have the least negative impact on a reader's ability to engage vertically with a text. Accordingly, just like the titles produced by Atavist, the enhanced e-books this thesis here proposes would allow the reader to activate and deactivate available embedded media. Similar to "in-line extras", an icon would be accessible to the reader at all times so that s/he has the ability to control the on-screen reading experience.

As with Atavist (and in order to avoid an on-screen experience that resembles a traditional computer encounter), if the embedded media were activated, text words or phrases which are hyperlinked would be signalled – they would be raised and back-shadowed (not underlined

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and blue). Further, the following would appear as standard functionality: an option to change the text size; an option to access a chapter scrollbar allowing the reader to move easily between chapters; a search function allowing the reader to search for specific text within the narrative; and lastly, a permanent "Share" icon, which would allow readers to post comments to an internal forum, email a particular passage, or link directly to social networking sites such as Facebook or Twitter.

In order to promote deep attention and engagement with the text, there should be an attempt to situate the major hypermedia attractions of a particular chapter at the beginning or end of the chapter. There are certain hyperlinks and contextual media tools that might remain in the narrative proper without the risk of burdening the reader's cognitive load, such as the ability to click on place names in order to activate a map, click on a word or phrase to bring up an historical timeline, investigate cross-literary references, and click on a word to access its dictionary definition. More time-intensive media, such as newspaper or online articles, videos and audio interviews, as in the East India Press production of *Nightingale* (Farland 2011), should remain outside of the prose in order to prevent interrupting text immersion.

Lastly, as demonstrated by the producers of *Our Choice* (Push Pop Press 2011a), *Nightingale* (Farland 2011) and titles released by Atavist (Dobbs 2011 and Bearman 2011), hyperlinks from the narrative proper should not lead the reader into a vast hyperlinked web of information. In order to retain maximum engagement with the text and avoid external distractions, the interface design of an enhanced e-book should allow the reader to navigate away from the prose to a single destination, with a clear option to return seamlessly.

In imagining the digital interface of *The Last Resort* and *The Grass is Singing,* I am going to discuss in some detail the reader's first contact with each application. In the context of this chapter, the assumption is that the reader is a digital native whose condition of hyper-attention is preventing vertical engagement with literary works. It might also be worth speculating, based on experience alone, that once the digital native is engaged by a literary work, the power of the prose grows exponentially, and the need for hypermedia to be employed as "attraction" is reduced. In other words, in many cases a top-heavy hypermedia design may apply to the so-called "point of engagement" (O'Brien and Toms 2009, p.943), specifically because it is at this stage that the literary work is likely to be competing for attention among a number of other media.

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The digital native who "tapped" on *The Last Resort* app I am here proposing on his screen would prompt a video of Zimbabwean poet Amanda Hammar. In addition to being a poet, Hammar happens also to be an expert in African studies, social policy and international development studies (*Amanda Hammar* n.d.). She has worked in the Zimbabwean public sector for almost two decades, specialising in rural development and local government reform and is no stranger to the history of that country's land policies (*Amanda Hammar* n.d.).

Hammar's video would be presented so that it might strengthen the appeal of the initial point of engagement. For that reason – and to reflect the fact that the memoir that follows deals with politically charged (and sometimes dangerous) discussions of a regime that is considered to be dictatorial – it would appear to the reader that Hammar had created the video herself: sitting in a home office or study, staring directly at the camera, the viewer might experience some static, and, in the first few moments, an interrupted video signal while Hammar attempts to establish a line. Hammar would introduce herself as an "exiled" white Zimbabwean who is providing a video foreword to Douglas Rogers's memoir, *The Last Resort*. After imparting a succinct overview of the events leading up to the initial Zimbabwean farm invasions in 2000, Hammar might simply say "this is the story of Drifters game farm and lodge and the battle of the author, Douglas Rogers's parents, to retain the rights to their farm and home". The video would conclude with Hammar's evocation of the current condition of the white Zimbabwean and, before signing off, she would look directly into the camera, pause, and then deliver a performance of her own poem, *Zimbabwe Lost*:

What kind of African.
My skin
the colour of colonisation.

Rooted baobab-deep.
Orphaned now
by the quarrels of history.

Moving
from an ache to an agony

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> flesh tears from bone
> heart from home.
> (Hammar 2002)

The video signal would then crackle, before being permanently lost.

Rogers's memoir begins:

> I was eight thousand kilometres away, drunk and happily unaware at a friend's birthday party in Berlin, when I learned that the first white farmer had been murdered. Someone had left a television on in the corner of the apartment. I knew, even with the sound off, that it was a news report on Zimbabwe. (2009, p.1)

The reader learns that Rogers has "been out of Zimbabwe for seven years" and that his parents live on a game farm and backpacker lodge about "an hour's drive" from where the "first white farmer had been murdered" (2009, p.1).

The phone-call that Rogers makes to his parents immediately after learning of the murder consists of a relatively clipped dialogue, but it summarises, in advance, the humour and resilience that his parents exude throughout the memoir, compared to his own pervasive sense of anxiety. Rather than reading this dialogue in the narrative proper, the enhanced version of *The Last Resort* would allow the reader to experience a dramatic re-enactment vis-à-vis an audio version of the telephone conversation. Rather than employ actors, a production director would be amiss not to encourage Rogers and his mother to play their own parts, drawing his reader firmly into the reality of the impending action:

> "Mom, it's me, Douglas. Jesus, what's happening? Are you guys all right?"
>
> "It's terrible," she said.
>
> I pictured her and my father barricaded in the house, a mob rattling their gates.
>
> "What's happening? Mom, what's happening?"

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> "We've already lost four wickets."
>
> "Four what?"
>
> "Four wickets, darling. Not going very well at all. It's ninety-one for four…"
>
> *Christ.* She and my father were watching a cricket match. I could hear the crackle of the commentary on the TV in the background. I wasn't sure whether to be relieved or horrified.
>
> "Jeez, Ma. Not the cricket. The *farm*. Have you any idea what's going on? This guy has been murdered up the road from you. Are you sure you're okay?" (2009, p.2)

After the initial miscommunication, the conversation between Rogers and his mother continues with his mother's declaration that "We are Zimbabweans. This is *our* land … *Over my dead body will they take this place. Over my dead body"* (2009, p.3).

At the chapter's end – and in keeping with an interface design that situates the bulk of the hypermedia on either side of the author's prose – the reader would be presented with several digital windows. The first might link to a video news report on the first invasions of white-owned farms in Zimbabwe in 2000. A second option would connect the reader to a newspaper report detailing the death of the first white murdered farmer, David Stevens (BBC.co.uk 2000). Chapter one's final digital window would activate an image library, allowing the reader to flip through photos of the author's parents, Lyn and Ros Rogers, on their farm in Zimbabwe.

Hammar's foreword, as well as chapter one's proposed digital windows, present an idea of the kind of enhanced information layering that is likely to re-engage the attention of a digital native. However, rather than present a chapter-by-chapter summation detailing how digital enhancements might be introduced in terms of my proposed model for an enhanced, e-book version of *The Last Resort*, the following section will use Rogers's memoir to discuss some of the practical possibilities for an extension of this model. In doing this, I return once more to George Landow's objectives (1997 cited in Dobson & Willinsky 2008, p.289) for future

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new media as a way to narrow and concentrate my focus. More specifically, I pose the question, how might an enhanced e-book version of *The Last Resort* empower readers, introduce them to new forms of writing, and facilitate interdisciplinary work?

On a very basic level, for non-African (and indeed also non-Zimbabwean) readers of *The Last Resort*, instant translations of words such as “shamwari” (Rogers 2009, p.5), “sekuru” (p.5), “kanjani” (p.28) and “pungwe” (p.51) would be helpful. I mentioned briefly the privilege, using an e-book, of being able instantly to tap on a word in order to bring up its definition. For literary works born in marginal countries, a similar function might allow authors to include otherwise “strange” idiomatic language, without the risk of frustrating readers who are foreign to the milieu and locale of the novel’s setting. We might classify this as a contextual media tool. Similar media would allow the same reader a significantly more meaningful sense of place. Again, this kind of functionality might prove more appealing to authors writing from the perceived periphery, but Charlotte Brontë might exclaim that even in her sister’s canonical *Wuthering Heights,* the effect of the prose may be rendered substantially more forceful if the reader were able to access a visual sense of the landscape. In Rogers’s memoir, this access would be via a digital window providing images of the Zimbabwean Eastern Highlands, the nearby town of Mutare, as well as the Drifters game farm and lodge. Some authors may opt for an esoteric approach to image-presentation, as was the case in David Farland’s *Nightingale* (2011), and so Rogers might choose instead to show only artwork, or abstract landscape photography. Here he would be restricting access to varieties of image, so as to avoid replacing the imaginary ideation already at work in his reader’s mind.

Granting the reader idiomatic access, as well as providing him or her with a sense of place, establishes an important foundation: it starts – at a basic level – to remove obstacles that may exist between reader and text. The aim is to allow the digital native, reading from a small town in, say, Kansas, to connect with a faraway place in a meaningful way so that a new set of schemas might begin to develop.

The next information layer would involve enhancing the primary text with socio-political media. Although the final selection would require extensive review, in a nonfiction title that is rich in historical and political content there should be a vast amount of media available. During the course of reading *The Last Resort*, the socio-political layer would include links to

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resources that explain, among other aspects: King Lobengula's reign and early colonial settlement in the area now known as Zimbabwe; an explanation of the two "Chimurengas" (or resistance wars); a history of the Zimbabwe African National Liberation Army (ZANLA); a history of the ruling party, the Zimbabwe African National Union – Patriotic Front (ZANU-PF); a history of the main opposition party, the Movement for Democratic Change (MDC); and a biographical sketch of important political figures such as Robert Mugabe and Morgan Tsvangirai, leader of the MDC.

As a practical example, at the end of chapter three, which includes a brief summary of Robert Mugabe's political career, a digital window would link to a 1976 BBC Focus on Africa video interview with Robert Mugabe, in which the future Zimbabwean leader discusses, according to the producer, his "position as leader of this most active group of guerrillas" as well as his party's vision for an independent Zimbabwe (Robustfesto 2009). Via a second digital window, the reader would have access to an interview with the author of the nonfiction work *Dinner with Mugabe*, Heidi Holland. In the video, Holland addresses the tendency of the media-at-large to churn out superficial and stereotypical reports on Mugabe, especially in the years since the controversial farm invasions. Holland says: "[Mugabe] had become this cardboard cut-out, one-dimensional villain" and her own objective is to present an altogether much more nuanced approach to Mugabe and his motivations (DisposableName 2008). A final digital window would link the reader to a *Time Magazine* article by acclaimed Zimbabwean author, Peter Godwin. "Ulterior Motives" published in May, 2000, presents Godwin's belief that whites in Zimbabwe

> were targeted for two reasons: they were identified as major suppliers of funds for the MDC, and the farmers in particular were blamed for mobilizing their employees to vote no [in a referendum designed to extend Mugabe's presidential powers]. What we see now is payback time. (Godwin, n.p.)

This cross-genre macrostructure has the potential to extend its contextual media offering beyond the newspaper articles and videos that the reader might ordinarily expect in a product such as this. Apart from Hammar's proposed foreword to Rogers's memoir, there are many more instances in *The Last Resort* where digital windows are capable of connecting a reader to cultural sources that s/he might not otherwise have discovered. In particular, chapters 16 and 17, which discuss Zimbabwe's "blood diamonds" as well as the controversial 2008

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presidential elections, have the potential to connect the reader to Zimbabwean rap music, poetry and banned art.

According to many reports, the Marange diamond fields, discovered in south-eastern Zimbabwe in 2006, are among the world's largest, representing the most prolific diamond find in over a century (Thornycroft & Laing, 2012). For almost two years, the Marange fields allowed a portion of Zimbabwe's struggling population to make a living, either from digging for diamonds or from illegally trading in them (Internal Displacement Monitoring Centre 2011). However, only two years later, the government's "Operation Hakudzokwi" focused on violently removing unofficial miners, traders, and middlemen, effectively excluding Zimbabwe's citizens from the country's most profitable industry (Internal Displacement Monitoring Centre 2011). In his memoir, Rogers tells every story via another: in this case the story of Zimbabwe's diamond industry is relayed vis-à-vis an "ngoda" or diamond dealer named Fatso (2009, p.254). It would be reasonable to expect some sort of video interaction with Fatso in the digital version of the memoir, perhaps Fatso relaying the story of his most lucrative diamond deal, or discussing what opportunities were available to him after the government sealed off the Marange diamond fields. Another opportunity would see the ngoda, Fatso, introducing another Fatso: Comrade Fatso, the popular Zimbabwean spoken word artist. Fatso would introduce the music video, "Korokoza", by Comrade Fatso and his band, "Chabvondoka". "Korokoza" means "hustle" in Shona, and Fatso might introduce the music video in his own way, or by summarising the words of Nomadix Wax, the record label that produced the "Korokoza" music video:

> Korokoza is a hopeful song dedicated to the resilience of Zimbabweans and people across the world who struggle to survive. Comrade Fatso deals with the contentious Marange diamond issue in the song attacking ZANU (PF) for not allowing the local Marange community to benefit from diamonds found in their area. Instead ZANU (PF) cronies and the army moved in, massacring the local community and placing the diamond mining under their clandestine control. (*Comrade Fatso & Chabvondoka* 2011)

Not surprisingly, Chabvondoka's debut album, "House of Hunger", was banned in Zimbabwe, owing to its political content (Comrade Fatso & Chabvondoka International Management 2011). The music video features urban scenes from Zimbabwe's largest city,

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Harare, where the streets of the city-centre are dominated by vendors, hawkers and unemployed people hanging around on street corners. It's a scene that pays homage to the enterprising "hustlers" who – whether selling a diamond or a potato – are doing what they can to survive. As part of the song, Zimbabwean rap artist, Outspoken, says:

> I'm holding on until something gives
> I gotta keep going in order to survive
> Placing my mousetrap in burnt fields
> I'm not afraid of the risks.
> I gotta keep going to survive.
>
> Everyday we just hustle.
> Our lives are all about hustling.
> Everyday we Hustle!
> Korokoza! Korokoza
> (Dimagee 2011).

As an additional resource, this digital window would include a link to view an American news channel interviewing Rogers about the ngoda, Fatso, and Zimbabwe's Marange "blood diamonds" (TheShtoo 2009).

In chapter seventeen Rogers describes the circumstances surrounding the victory of the MDC over Robert Mugabe and his ZANU-PF party in the 2008 presidential and parliamentary elections (2009, p.277). ZANU-PF contested the presidential result, and in the time running up to a planned runoff vote, the ruling party allegedly unleashed "Operation Where Did You Put Your X?" – "a statewide wave of terror masterminded by Robert Mugabe and his senior military leaders to punish those who had marked ballots for the MDC" (Rogers 2007, p.278). According to Rogers, "MDC activists were abducted, beaten, tortured, murdered. Supporters in rural villages were burned with molten plastic, the soles of their feet clubbed until they could no longer walk" (p.279). A digital window in this chapter would activate Beaven Tapureta's poem, *Carry His Spirit to a New Zimbabwe*, which was published in the Poetry International Web Zimbabwe election issue of October 2008. Unlike Hammar's delivery of *Zimbabwe Lost*, in this case, the words would appear on the reader's screen. However, the reader would be able to follow the words as Tapureta slowly reads them:

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Carry His Spirit to a New Zimbabwe

I lie beside my brother
In the glaring mountains
Of my countryside
He looks at me
Eyes swollen
Buttocks fried
“Some men did it.
Said I belong to a party they don’t like,” he whispers

This sight alone plants my
Future in front of me

“Take me home,” he pleads
I try
But there is nowhere to touch
his flogged body
and hold it.
I try
With bare hands
To lift him
his pain is my pain
Zimbabwe, our pain.
God knows where it will end
They might drive it the direction they want
Our future seeks another route.

I softly lift my brother
in his bloodied shirt
red
Like the flag
of my

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country
now
tattered
muddied
defiled
I lift him home
My brother
With all my love
His spirit rises to a new Zimbabwe.

(Tapureta 2008)

Chapter 17 would also facilitate an introduction to the Zimbabwean artist Owen Maseko. Maseko has been arrested on a number of occasions for undermining the rule of the President, most famously as a result of an exhibition at the National Gallery at Bulawayo which included installations and paintings depicting the "Gukurahundi, Zimbabwe's name for the slaying and torture of thousands of civilians in the Matabeleland region a quarter century ago" (Dugger 2011, n.p.). A more recent exhibition by Owen Maseko focused on the 2008 election, and included a painting entitled "Snatch". This work depicted one of Mugabe's henchmen attempting to steal a ballot box from the citizens of Zimbabwe (Davis 2011). Another piece, entitled "Flushing", is an installation in which the words "PLACE YOUR BALLOT HERE" are painted above a Perspex ballot box encapsulating a toilet. On the back wall is a depiction of Robert Mugabe, readying himself to flush the toilet, along with all of the ballots (Davis 2011).

Hypermedia layers should not ignore the influence on knowledge-sharing that social networking sites exercise. This thesis has already discussed the online usage habits of digital natives, but interestingly, according to the Pew Internet and American Life Project, "65% of online adults use social networking sites" (2011, p.2). The growth in online social networking participation is not limited to digital natives:

> [U]se among internet users aged 65 and older has grown 150%, from 13% in April 2009 to 33% in May 2011. Similarly, during this same time period use by 50-64 year-old internet users doubled – from 25% to 51%. (Pew Internet & American Life Project 2011, p.6)

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I recently posted the following comment in *The Last Resort* Facebook group, which has 1615 members:

> Hi Douglas. If history is best understood by trying to identify and understand its patterns, then to what extent is your memoir a warning to South Africans? Do people (white and black) south of the Limpopo know, based on history, what's coming for them? Can unique circumstances in South Africa prevent a violent and rampageous redressing of wealth and land ownership issues? I'm interested in what you, Zimbabweans, and members of this group think ... (James 2012b)

Although I am still waiting for a comment from the author himself (I suspect that this comment is more challenging than replies to "Hi Douglas, loved your book"), I have already had two people comment. These are strangers, with whom I am interacting in a space outside of Rogers's text, and it must be mentioned that one of the comments recommends that I extend my understanding of Zimbabwean politics by reading Ben Freeth's nonfiction title *Mugabe and the White African* (Freeth 2011) or by watching the award-winning documentary by the same name.[8]

It would appear that there are benefits to increasing the interactions between a digital book and various social networking sites for a number of stakeholders. First, as demonstrated, for the reader, there is the ability to share opinions, feelings and reactions, engage with the author and other readers, and learn more about the book that s/he is reading as well as related works. Immediately following Hammar's delivery of *Zimbabwe Lost*, the digital native should be given the option to share the video and a text version of the poem directly to Facebook, allowing that reader's online social network access to what we might call Rogers's "digital trailer" or "preview". For the author, one of social media's most important functions is advertising, especially if readers are able to share that they are reading *The Last Resort*,

[8] *Mugabe and the White African,* directed by Lucy Bailey and Andrew Thompson, is a feature-length documentary of a white Zimbabwean farmer's attempt to maintain control over his farm, in spite of numerous attempts by war veterans to violently take ownership. The documentary has won numerous awards and was shortlisted for an Oscar in 2010 (*Mugabe and the White African* 2010).

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highlight passages they enjoy, and recommend the memoir to their friends. More importantly, if every reader became part of *The Last Resort* Facebook group, and was able to get closer to the author and to other readers than ever before, then one can just imagine the benefits of the captive audience that Rogers might have access to when the time comes for him to launch his next book. There are other stakeholders who also stand to benefit. An example can be found in chapter 12, which deals with acts of media censorship in Zimbabwe. Rogers attends a pre-election MDC political rally where he meets Sydney Saize, who worked for Studio 7, "a Voice of America station broadcasting from Botswana" (2009, p.168). The chapter also discusses Edward Chikomba, the cameraman who smuggled images out of Zimbabwe of Morgan Tsvangirai after he was assaulted at a prayer meeting in March 2007 (2009, p.172). At the end of this chapter, digital windows would allow the reader to navigate through to the Studio 7 radio website, as well as the independent Zimbabwean radio station operating out of the UK – "SW Radio Africa". As well as viewing current news from Zimbabwe on these websites, the reader would be able to view an archive of podcasts, and connect to, and tick the 'Like' icon of both organisations' Facebook pages.

A final layer of hypermedia in *The Last Resort* would look to use digital tools to bring the reader as close as possible to the condition of the disenfranchised Zimbabwean farmer. In chapter seven Rogers's text is concerned with the "refugees" (p.89), referring to the white farmers who have been evicted from their farms and have found refuge in the sixteen cottages located on his parents' game farm (p.90): "[W]ord in the valley was that if you lost your home and needed a roof over your head, Lyn and Ros Rogers at Drifters, the old pizza place, had cottages, good for short stays or long" (2009, p.91). According to Rogers's parents, "eight farming families had found sanctuary at Drifters over the past year, and more would do so in the years ahead ... They were Zimbabweans. There was nowhere else to go" (2009, p.91). For his memoir, Rogers interviews each one of the families or individuals staying on his parent's property, including the famous De Klerk family, related to former South African Prime Minister, F.W. de Klerk, and evicted from one of Zimbabwe's largest and most valuable farms, "Kondozi" (2009, p.74). According to Rogers,

> I started visiting these old white farmers with a notebook and a tape recorder to hear about their lives ... They were bookends on a disappearing world, the last of a lost white tribe. Yet they seemed to recall the old days with extra-ordinary clarity and the current chaos with a remarkable stoicism and, believe it or not, humour. (2009, p.92)

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At this stage of Rogers's memoir, arguably the most important, a digital window would allow the reader to listen to Rogers's audio interviews with the refugees. Depending on the quality of the recordings, a production team might decide to include edited versions of the original recordings; or, the originals might be used to recreate dramatised versions. Although the interviews are quite long, the production team might edit them, and, as with the telephone conversation in chapter one, have Rogers narrate any prose lying outside of the dialogue itself. Imagine the following extract, taken from Rogers's interview with Unita Herrer, as an audio window complete with narration by Rogers:

> It was dark outside now. The humped hills behind us were domed shadows. Frans was snoring. It was time to go. I thanked Unita for her time and hugged her on the porch.
>
> She saw my tape recorder and said she had one more thing to tell me. She gazed up to the stars and whispered: "I am returning to my place of birth, but my first love is Zimbabwe. This is where my heart is, this is where my blood is, this is where my roots are, this is where my children were born. My Zimbabwe. My Zimbabwe..."
>
> It was a beautiful theatrical flourish, and the tears welled in my eyes.
>
> Then she switched back to her normal voice.
>
> "Did you get all that? Come on, give me another go – I can do it better."
>
> And she said it again. She had finished her final close-up. (2009, p.97)

A production team might only decide to include one audio interview, so as not to bombard the reader, or perhaps the decision would be taken to include pertinent segments from each interview. At the end of the chapter, the interface design would supplement the audio interviews by providing the following digital window options: (1) Watch the award-winning 2009 video documentary *Mugabe and the White African*, winner of the British Independent Film Awards Best Documentary Prize in 2009 (*Mugabe and the White African* 2010); (2) Watch the 2009 CNN Christiane Amanpour interview with Robert Mugabe (*Robert Mugabe on Power Sharing* 2009); (3) New material: listen to Rogers's recent audio interview with

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Margaret Matongo, a black Zimbabwean farmer whose commercial farm was purchased prior to the 2000 land invasions; and (4) Read veteran Newsweek correspondent, Joshua Hammer's article, "(Almost) Out of Africa: The White Tribes" (Hammer 2010).

In the epilogue, "Is This Place On The Way Up, Or Down?" Rogers shares the good news that, eight years after the initial land invasions, his parents are still in their home and on their farm (2009, p.303). However, as a result of a violent campaign, President Robert Mugabe remains President of Zimbabwe. Rogers writes:

> On 22 June 2008, the day after the visit of the war veterans to Drifters, Morgan Tsvangirai pulled out of the runoff election. The death toll was already too high; he did so to avoid a bigger bloodbath. (p.299)

Despite the crippling economy, the reader is told that Rogers's parents are finding innovative ways to make a living, so that they may remain in Zimbabwe:

> They also have a new game now which is bringing them a little money at last: coffee roasting … In fact, visit a hotel or restaurant in Zimbabwe today, and it's likely the coffee you order has been roasted by the two Johns at Drifters, and supplied by my parents. (p.305)

Just as a reader's first contact with a literary work is important, so is the last. While the production team of a particular work might have a number of their own ideas, academics imagining this digital interface with me, such as literary theorists Katherine Hayles and Sven Birkerts, might be most excited about the possibilities, at the end of a literary work, of retaining the digital native within a literary space: connecting him or her immediately to other literary works, and to social networks so that an experience with *The Last Resort* can be discussed.

After completing the memoir then, the reader might be presented with the following options: (1) Purchase Lyn and Ros Rogers's Zimbabwe Vumba Roast Coffee online; (2) Contribute to *The Last Resort* Facebook group discussions; and (3) Post a link and review of *The Last Resort* to your Facebook page. A fourth option would read: "If you are interested in reading more Zimbabwean literature, click here to access a full list of Rogers's recommendations."

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These might include Shimmer Chinodya's *Harvest of Thorns* (1990); Tsitsi Dangarembga's *Nervous Conditions* (1988); Peter Godwin's *Mukiwa: A White Boy in Africa* (1996) and *When a Crocodile Eats the Sun* (2006); Petina Gappah's collection of short stories *An Elegy for Easterly* (2009); Doris Lessing's *The Grass is Singing* (1994 [1950]); the nonfiction title *Zimbabwe's Unfinished Business* (2003), co-edited by Amanda Hammar; and Heidi Holland's *Dinner with Mugabe* (2008).

Finally, the digital packaging of Rogers's memoir allows him an opportunity that has never before been afforded authors: the ability instantly to update his work long after the date of original production. Although *The Last Resort* print edition was published in 2009, the enhanced e-book edition might contain a library of updates, available to readers. For example, in March 2013 (the estimated date of Zimbabwe's next Presidential election) a reader might get a notification on his screen: "Douglas Rogers has added a video, 'Latest reports on voting in Mutare District' to *The Last Resort*. Would you like to view it now?"

The prospect of imagining a digital interface for Doris Lessing's 1950 novel *The Grass is Singing* is much more daunting. Research covered in Chapter Four of this thesis suggests that publishing companies are struggling to absorb fiction into the digital reading space, especially fiction not originally intended for the screen. One might argue that this thesis had little trouble imagining layers of digital windows reaching out from within the prose of Brontë's *Wuthering Heights*, but Brontë's is a classic European novel, comfortably ensconced in the upper echelons of the canon, and has, surrounding it, an uninterrupted feed of art, music, film, poetry and academic debate which it can lay claim to inspiring. Lessing's novel has inspired far less cross-media that might be incorporated into its digital repackaging and, although Lessing is a recent Nobel Laureate, her first novel remains out of reach for many transnational digital natives, many of whom will never have heard of the author Doris Lessing, the country Southern Rhodesia or of the colonial African phrase, "the native problem" (Lessing 1994 [1950], p.59).

Unlike *The Last Resort*, then, a digital version of *The Grass is Singing* would rely more heavily on the development of original media. In the case of *The Grass is Singing* – and with the objective of allowing more readers access to an "authoritative literary theory discourse" – I propose that original media might allow the reader to select videos in which narrative guides elaborate on a number of socio-political and historical discourses related to the

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primary text. For such a feature to have any sort of credibility, it would be a requirement that the narrative guides were respected experts in their fields. By way of example only, *The Grass is Singing* might be guided by Professor Terence Ranger, a prominent African historian (specialising in Zimbabwean history) who held the Rhodes Chair of Race Relations at Oxford University until 1997 (*Historiography, Patriotic History and the History of the Nation: The Struggle over the Past in Zimbabwe*, 2003) or Dr. Joost Fontein, a social anthropologist and Zimbabwe specialist from the University of Edinburgh (Electronic Immigration Network n.d.). Literary professor John Mullan from University College London, who interviewed Doris Lessing at her home in April 2008 - shortly after she had been awarded the Nobel Prize for Literature (Mullan 2008) – might also be considered as a narrative guide. Lastly, there would be value in adding a non-academic guide, such as an old, white Zimbabwean farmer who lived or worked on a farm in Southern Rhodesian in Lessing's time, and might be capable of providing anecdotal and unmediated accounts of colonial life. Let us imagine that the cultural guide in Lessing's novel is the animated Unita Herrer, one of the "refugees" interviewed by Douglas Rogers in *The Last Resort*.

Similar to the reader's first contact with Rogers's memoir, after tapping on the icon for the *The Grass is Singing* app, the reader would be presented with a video foreword. The content of that message would acknowledge the necessity quickly to connect the millennial reader with a sense of the relevance of what he or she is about to read. The speaker – who might be any one of the aforementioned narrative guides – might begin the foreword thus:

> Should young people read this novel? Should you, with your internet and mobile phones, CNN and Facebook, be interested in a dusty old story about a crime that took place on an African farm in the 1940s?
>
> Should you be concerned with the old South African dictate: "Though shalt not let your fellow whites sink lower than a certain point; because if you do, the black man will see he is as good as you are"?
>
> Should you be curious about how a country has come to arrive at its present?
>
> A story, whether told as part of an oral tradition, or passed down on the pages of a book, can never answer all of the questions. But sometimes the answer to a seemingly

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> vagrant question like "why did she bring the whip down across his face?" can, in hindsight, open our eyes to a set of unique truths that can only be found in one place: the pages of an old dusty story.

Following these words, the speaker would introduce the reader to the remaining narrative guides, orientating the reader with this component of the digital novel's instructional design:

> You will find a number of video clips presented by us, the narrative guides, at the end of each chapter. Of course, you are in no way obliged to watch these videos; all additional media in this digital version of Doris Lessing's *The Grass is Singing* are optional. Our intention though, is to help readers from all over the world better access the time and place of Lessing's debut novel.

The reader's journey with the prose would begin with him or her tapping on the icon, "Begin Reading", at which point the novel's opening paragraph would come into focus on his or her screen, packaged to appear as part of an old newspaper clipping. If an audio recording of Lessing reading the opening of her novel existed, or, if Lessing agreed to read selected passages of *The Grass is Singing* for inclusion in this project, then these opening words would be delivered by Lessing herself:

> MURDER MYSTERY
> *By Special Correspondent*
> Mary Turner, wife of Richard Turner, a farmer at Ngesi, was found murdered on the front verandah of their homestead yesterday morning. The houseboy, who has been arrested, has confessed to the crime. No motive has been discovered.
>
> It is thought he was in search of valuables. (Lessing 1994 [1950], p.9)

At this stage the narrative proper would begin, and the reader would not be interrupted with any further embedded media until the end of the chapter, at which point the options might include: (1) Professor Terence Ranger provides a brief introduction to 1940s Southern Rhodesia; (2) Unita Herrer, an 89-year-old Zimbabwean farmer, discusses life in the British protectorate of Southern Rhodesia; and (3) View an interactive map of Southern Rhodesia,

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including a three-dimensional layout of Richard and Mary Turner's Ngesi homestead and farm.

To return to the hypothetical scenario fashioned at an earlier point in this chapter, there are many examples in Lessing's novel where narrative guides would bolster our Kansas reader's reflective engagement with the text. For example, in chapter four Lessing writes:

> [Mary] had never come into contact with natives before, as an employer on her own account. Her mother's servants she had been forbidden to talk to; in the club she had been kind to the waiters; but the 'native problem' meant for her other women's complaints of their servants at tea parties. She was afraid of them of course. Every woman in South Africa is brought up to be. (1994 [1950], p.59)

Later the reader learns that in order to communicate better with her first native servant, Mary "settled down on the bed with a handbook on kitchen kaffir" (Lessing 1994 [1950], p.60).

At the close of the chapter, Professor Ranger's video would discuss what colonial whites in southern Africa referred to as "the native problem" (Lessing 1994 [1950], p.59). He would also explain "kitchen kaffir" (Lessing 1994 [1950], p.60), a pidgin based primarily on the Zulu language, and provide some examples, together with some visual extracts from an instructional book similar to the one from which Mary would have studied. At the end of this chapter the reader would also be able to view a video in which an off-camera interviewer asks Unita Herrer a number of questions that would – for the benefit of the reader – add context to Mary's fears of "natives". The interviewer might ask questions such as: (1) Do you remember being afraid of black people as a young girl? (2) Was there reason to be afraid of black people; was violent crime rife? (3) Can you remember having black friends as a child?[9]

Chapter seven of *The Grass is Singing* contains what is arguably the novel's pivotal scene, in which Mary strikes a farm labourer across the face with a sjambok for his perceived surliness, unaware that the man would one day become the "houseboy" who goes on to murder her

[9] The designers of this hypermedia will need to take into consideration that while there is an opportunity to increase accessibility to Lessing's text for transnational readers, the added hypermedia cannot be seen to patronise or talk down to readers who are more familiar with southern African discourses.

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(Lessing 1994 [1950], p.119). The chapter also introduces concepts fundamental to southern African apartheid and colonial ideology, including the idea of the native compound and contract labour. As such, clicking on a particular window at the end this chapter would activate a video of Professor Ranger, who would discuss contract labour, and then go on to discuss what the implications would be for a white farmer who struck, hurt or killed one of his natives. Shortly after "[Mary] lifted her whip and brought it down across [Moses's] face in a vicious swinging blow", Lessing writes:

> If this native had gone to the police station, [Mary] might have been cautioned, since it was her first offence … She had behind her the police, the courts, the jails: he, nothing but patience. Yet she was maddened by the thought he had even the right to appeal; her greatest anger was directed against the sentimentalists and theoreticians, whom she thought of as "They" – the law-makers and the Civil Service – who interfered with the natural right of a white farmer to treat his labour as he pleased. (1994 [1950], p.120)

As was the case at the close of chapter four, at the end of chapter seven Professor Ranger's historical, fact-based input would be balanced with an option to view the subjective thoughts of narrative guide Unita Herrer. The possibilities for the content of such a discussion are numerous, but – again for the benefit of the reader – the intention would be for Unita to establish: the prevalence, in her opinion, of physical abuse wrought on farm labourers in Southern Rhodesia; the general working conditions of farm labourers; where farm labourers were recruited from, and so on. As a white Zimbabwean farmer who has lived in that country both pre- and post-independence, it would also be of interest at this stage to discuss Unita's own reaction to Mary's violent assault on Moses.

As with the digital version of *The Last Resort,* in *The Grass is Singing* readers would be provided with a number of contextual media tools. Readers would be able to tap on colloquial words and phrases, allowing them better access to nuances in the text. This would be in the form of straightforward pop-up definitions, such as might be the case with "Dorps" (Lessing 1994 [1950], p.31) and "Kraal" (p.65). However, with a word such as "Sjambok" (p.14), which has special relevance to this novel, rather than a pop-up definition appearing on the screen, an original media video presented by Unita Herrer would provide images as well as explain the cultural symbolism of the leather whip.

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In the case of Douglas Rogers's *The Last Resort*, this thesis proposed that contextual media tools should allow readers easier passage to an understanding of the locale of the work's setting. As a memoir, containing a great many references to specific locations, it was logical to suggest instances where photographic windows might grant the reader a better sense of place. In Lessing's fiction, apart from the knowledge that the novel's action centres on a farm called "Ngesi" somewhere in Southern Rhodesia, the reader must rely on the prose to orientate him or herself with a sense of the landscape. The option exists to allow the reader access to a window which included a handful of Zimbabwean landscape paintings, depicting the veld, or a small "dorp" or town. Admittedly, what originally attracted me to Lessing's first novel was the watercolour on the front cover. The 1994 edition of the novel has on its cover an abstract landscape: what could be an umbrella thorn acacia, quintessentially African, stands on an empty, yellow veld providing shade for a single person, standing tall and alert underneath it. Looking at that artistic impression, it is not hard to imagine that the grass of that veld has a story to tell, most likely the story of the dark figure who stares out across it. Perhaps, in addition to the possibility of including a number of abstract landscape paintings, the potential exists to include a contextual media tool similar to the one discussed as part of Al Gore's *Our Choice* (Push Pop Press 2011a) introduction. As a reminder, the reader was able to "pinch" a thumbnail image to a enlarge a photograph of a native Alaskan, who is standing in front of her house, which has collapsed as a result of melting permafrost. In the case of *The Grass is Singing,* to allow greater access to readers who are foreign to the milieu and locale of the novel's setting, without imposing on the imaginary qualities of Lessing's text, windows at the end of chapters might contain photographs of a variety of Zimbabwean people, together with a small caption detailing the relevance of each photo. For example, photographs might include a farm labourer standing in front of his compound dwelling or in a kraal; a white farmer posing in front of his first successful crop of tobacco; or a group of black women waiting in line outside a "kaffir store" (Lessing 1994 [1950], p.92).

Contextual media tools – designed and placed in the interface of a fiction novel – might also look to expand the reader's knowledge, both of an author, and of what an author was intending to achieve or communicate. To this end a digital window might be included in which Professor Ranger speculates on what life in Southern Rhodesia would have been like for Lessing in particular, and more importantly, how her own political views might have contributed to her writing of *The Grass is Singing* as well as her emigration to England in

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1949. Another digital window would open up a video of Professor John Mullan's 2008 interview with Lessing (Mullan 2008). Yet another possibility would be to connect the reader to existing audio and video interviews in which the author discusses her novel herself. For example, in December 2001, Lessing was a guest on the BBC Radio 4 programme "Bookclub", in which James Naughtie – together with a live group of listeners – discussed *The Grass is Singing* with the author. One member of the group asks if Lessing was "trying to change things" by what she was writing. Lessing responded as follows:

> No I wasn't. Not at all because I've never believed in that. First of all I just wanted to write my first novel because I was known by friends as a "writer" ... but all I had written were short stories and it was time I wrote a novel, and I had these various ideas. One idea struck me very powerfully round about then. I came across a little cutting, which is in the book, which reminded me of something. You must imagine these farms scattered over large areas. They hardly ever met, these farmers and their wives, and when they did they were greedy for gossip. They sat talking and there was a little girl listening, namely me, maybe nine, ten, eleven, and I'd listen to every word. One of the things that they talked about one afternoon was that there was a new arrival on the next farm. And the farmer's wife allowed the cookboy (I'm using the language of the time) to button up her dress from the back and brush her hair. Now, there is no way of conveying how many taboos she was breaking. (Lessing 2001)

The discussion goes on for 28 minutes, and there are a number of examples – similar to the one above – where a digital window at the end of any given chapter might link the reader directly to this interview with Doris Lessing, allowing a level of contact between the author and the reader, however indirect that contact might be.

As with Rogers's memoir, an interface designed for *The Grass is Singing* might also allow for contact between reader and reader. It was suggested in Chapter Five of this thesis that the British reader, reading J.M. Coetzee's *Disgrace* (2000), should – in a digital reading space – be able to click through to a forum where he or she might interact with a South African reader. In the same way, there is an opportunity to better engage the digital native from Kansas by allowing her access to readers and academics from southern Africa who are familiar with its socio-political discourses and history. For example, it was suggested that a digital window at the end of chapter four would allow the reader to view a video of Unita

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Herrer discussing prerogative racism in Southern Rhodesia before positing her own view on Lessing's disarming scene in which the white mistress, Mary, strikes a farm labourer across the face with a sjambok for his "lazy insolence" (Lessing, p.120). At the end of watching this video, the opportunity exists to prompt the digital native to post this passage to a social network, like Facebook or an internal, specialised forum, and then share her own opinions, feelings and reactions. Further, after viewing some of the static photographs of Southern Rhodesians that can be "pinched" on and expanded at the end of each chapter, there might be the option for readers to upload their own photographs from their Rhodesian past, to a specialised forum. In this way, one might postulate that the reality of Lessing's text – for the digital native – is continually expanded upon as s/he reads: Lessing's text is supplemented with historical photographs from Southern Rhodesia, and this feature, in turn, is supplemented by the reality of other reader's own photographs, stories and feelings about the novel.

The reader's digital window selection at the end of Lessing's novel would follow the conventions proposed in *The Last Resort*. For example, social media links would allow the reader immediately to express his or her post-reading views and opinions, and, if there were a forum or group (as is the case with *The Last Resort),* a link would allow readers to go to that location so that they might contribute. As was the case at the end of *The Last Resort*, it is suggested here that as soon as a reader is finished reading Lessing's novel, s/he should be provided with a link to view the author's suggestions for further reading. In this case the recommended titles would be similar to those suggested at the end of *The Last Resort*, but might extend beyond Zimbabwean authors and titles, to works that deal with postcolonialism on the African continent in general, such as Chinua Achebe's *Things Fall Apart* (1986) and J.M. Coetzee's *Waiting for the Barbarians* (1980). Other options would include: (1) Listen to the full 2001 BBC Radio Four Book Club presented by James Naughtie (Lessing 2001), in which Lessing discusses her first novel in detail; (2) Read Doris Lessing's controversial 2003 article about the state of Zimbabwe, titled "The Jewel of Africa" (2003); and (3) Read Doris Lessing's 2007 Nobel Prize acceptance speech (2007).

What I have attempted to do here, in the case of *The Grass is Singing*, is reclaim an acclaimed work of literary fiction from obscurity, so that it might become more appealing, more accessible, and more comprehensible for the digital native. I have assumed that this literary work, which happens also to be a work written from the periphery, is becoming

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increasingly inaccessible to the digital native for a number of reasons, the most obvious being that readers may know too little about the socio-political history of Southern Rhodesia to create the initial impetus that may lead to a reading of Lessing's work.

However, what if the reader had read an engaging and interactive nonfiction first? What if that nonfiction had been able to provide the reader with a situation model, or set of schemas, that created a desire to read more on the subject, and allowed access to a greater variety of work on the subject? In fact, what if *The Last Resort* and *The Grass is Singing* were packaged together within one on-screen app? The app might be called simply, *Stories from Zimbabwe.*

After tapping on the app's icon, an image-rich video would appear, displaying an array of jutting images to the background music of Comrade Fatso and Chabvondoka's "Bread and Wine". The video would include images of the Zimbabwean landscape, marching ZANLA war veterans, Prince Charles with Robert Mugabe in 1980, King Lobengula in the 1880s, Doris Lessing receiving the Nobel Prize for Literature, images of the Zimbabwean landscape, images of white Zimbabwean farmers juxtaposed against images of black Zimbabwean labourers, and a clear image of Bob Marley next to the Zimbabwean flag on independence day in 1980.

As the music softens, Douglas Rogers might appear on the screen and offer the following commentary:

> One of the qualities of a story is its ability to capture – often politically, historically and emotionally, personally – the details of an event that may otherwise be forgotten; to pull us into a moment, a relationship, a particular condition of history and help us to feel how and why that moment evolved and unravelled as it did. In Zimbabwe, Robert Mugabe's political party advocated the violent removal of whites from their commercial farms. For us, watching such news, we are at risk of seeing the history unfold from now, from the time that the event broadcasts live from the global newsroom. But invariably the history starts long before the media coverage does. The stories that make history, the stories of current injustices and of past iniquities are best understood and accessed via literature: the quiet archive that reminds us that news starts long before seven o'clock.

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> In the *Stories from Zimbabwe* digital literature application, you will find two literary works: my own memoir, *The Last Resort*, about my parents' personal struggle to retain ownership of their farm in Zimbabwe, and *The Grass is Singing,* Nobel Laureate Doris Lessing's first novel about a murder in a farming district of Southern Rhodesia in the 1940s. Enjoy the read, and all of the extra media that we have included, and feel free to connect with myself, and other readers, using the online forum in this app.

After the video finished, the reader's screen would land on the homepage of the app, where a full menu would be available, including: (a) Zimbabwe: a Brief History; (b) Interactive Maps; (c) Video & Photo Library; (d) Audio Library; (e) Author Interviews; (f) Academic Resources; (g) Comrade Fatso & Chabvondoka's Full Album, "House of Hunger"; (h) Video Documentary, "Mugabe and the White African"; (i) Recommended Further Reading; (j) *Stories from Zimbabwe* Facebook Page; and (k) Admin & Forums.

From this app homepage, readers would also be able to access both *The Last Resort* and *The Grass is Singing* although, if this was the first visit to the app, they would be encouraged to click on the icon "Start Here" in which case the app would automatically start with *The Last Resort,* implicitly recommending the order in which the two literary works should be read.

A number of other points need to be made. First, from a screen where the reader is reading one of the app's primary texts, s/he will be able to navigate to the following locations: Homepage; Zimbabwe History App; *Stories from Zimbabwe* Facebook page; Interactive Maps page; and any private forums that have been set up using the admin function.

Second, it should be noted that the reader will be able to access all media from both *The Last Resort* and *The Grass is Singing* by accessing any one of the menus on the homepage. For example, in the audio library the reader will be able to activate Rogers's audio interview with Unita Herrer, or the narration of Mary Turner's violent abuse of a farm labourer.

Third, the *Mugabe and the White African* video documentary, Comrade Fatso's album, "House of Hunger", and the Zimbabwe History App would all be included as part of the *Stories from Zimbabwe* app. In other words, for a set price, the reader would be purchasing

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two enhanced e-books, a unique history application, an award-winning video documentary and an original music album.

The fourth point to bear in mind is that the reader would have the ability, as is the case with current e-books, to bookmark his or her page. Upon entering the app, the video-introduction would always start up, but as with most online media, the reader would be able to select the option, "skip intro".

Lastly, the "Admin & Forums" area would allow a lecturer, professor or even a book club host to create a private group within the application, assigning a unique username and password to each person invited to the group. The private group would function as a forum where group members could post comments, favourite quotes, questions, and so on. The group's owner would also be able to upload material into the group, so for example, an academic might upload a critical essay on *The Grass is Singing*. If a group member selected to have notifications "on", then a notification would appear at the bottom of his or her screen: "Professor Jones has added 'Psychological and Cultural Border Crossings in Doris Lessing's *The Grass is Singing*' to the *Stories from Zimbabwe* Group"; or "Karen Smith posted the following note in *Stories from Zimbabwe:* 'If anyone was wandering if Mary does in fact have sexual relations with Moses, check out this interview with Lessing.'"

As an aside, there is no reason why *Stories from Zimbabwe* should be restricted to *The Last Resort* and *The Grass is Singing*. For example, if the reader bought one of the books recommended by the app, say *Nervous Conditions* (1998) by Tsitsi Dangarembga, then that novel, together with any enhanced media that came packaged with it, would be assimilated into the *Stories from Zimbabwe* app. Its audio files would slot into the Audio Library, its video files into the Video & Photo Library. In fact, in this way, interface designers might be able to help readers better organise and understand literary works they have read. For example, having a particular interest in American literature, but having misplaced many of the books that I have read, I would love to be able to access a digital app where I had stored my collection, together with digital copies of my collection's satellite media.

Previous chapters of this thesis have discussed a number of important opportunities and concerns presented by the digital reading space. The proposed app, *Stories from Zimbabwe*, attempts, in theory, to capitalise on the opportunities, spelled out by theorists such as George

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Landow and Katherine Hayles, and thoughtfully address a number of concerns, from the cognitive concerns set out by Nicholas Carr, to the more philosophical arguments presented in Sven Birkerts's *The Gutenberg Elegies* (1994). In discussing the possible digital interface design of *The Last Resort* and *The Grass is Singing* in this chapter, my approach has been to propose an operative model of those literary works, both as individual works, and as works packaged within a single app. However, now that this thesis's model of a digital reading space exists as a construct in practical terms, there is a need to return to some of the theoretical opportunities and concerns, and evaluate to what extent *Stories from Zimbabwe* – or the model that it represents – might be able to address these.

In Chapter Two of this thesis, I referred to Professor Robert Scholes who argues that "masterpieces" fail to address how young people should engage and read new media (1998, p.169). He stated that because we are "the most mediated human beings ever to exist", English in today's world might look at focusing on teaching students to "be able to read, interpret, and criticise texts in a wide range of modes, genres and media" (1998, p.84). Of course, implicit in Scholes's statement is an acknowledgement that the digital native has been programmed to use a variety of media to extract information and knowledge from his or her environment.

In *Stories from Zimbabwe*, digital windows expand the knowledge available to a reader via an interface that includes variegated media sources and perspectives, ranging from aural media, in the form of music, interviews and readings, to peer reviews on social media, and a variety of visual media, such as video, photography and art. Further, by situating *The Last Resort* and *The Grass is Singing* within one app, one of the objectives is to challenge the reader's critical approach to Zimbabwean history. Rogers presents Zimbabwe's farm invasions from a number of perspectives (black, white, war veteran, farmer, labourer, black entrepreneur) in *The Last Resort*, but the memoir's emphasis on the author's parents, as well as the intimate retelling of the stories of white "refugees", is likely to result in a reader who is inclined to sympathise with Zimbabwe's white farmers. The intention with *Stories from Zimbabwe,* packaged as it is, is for the reader to begin Lessing's novel shortly after completing Rogers's memoir, so that s/he might develop a more perspicacious, well-rounded and historically balanced understanding of Zimbabwe's "story". Fiction, nonfiction, and a carefully selected group of contextual media tools are intended to work within one literary application, not only in order to resemble an interactive environment to which digital natives may be more

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receptive, but also to present information so that it may maximise immersion, as well as critical engagement.

Scholes's sentiments echo those of his colleague, George Landow, whose 1997 views on the future of new media emphasised that hypermedia within a new literary interface design should empower readers, encourage critical thinking, facilitate interdisciplinary work and introduce readers to new forms of writing (cited in Dobson & Willinsky 2008, p.289). The homepage and menu options which have been hypothetically imagined here for a *Stories from Zimbabwe* literary app, as well as the contextual tools and hypermedia embedded within the app's two primary texts, have all been proposed to promote a space for enhanced critical thinking. The strategic interface proposed by this chapter has been careful to facilitate interdisciplinary connections and various forms of writing (historical writing, poetic evocations, personal reflections, and so on).

The ideas of relevance and accessibility have also been deemed important. Imagining how to construct an interface for a reader in her early twenties, who might be from the city of Kansas in North America, for a work such as *Wuthering Heights* (1992) or even *Harry Potter and the Philosopher's Stone* (1997), is far less intimidating than the prospect of imagining an interface for two Zimbabwean literary works. How would a digital reading space help periphery or marginal literatures engage the American digital native? How would a literary media app grant the reader more access – in terms of understanding – to a classic which might be in danger of obscurity?

Nicholas Carr's (2010) extensive review on reading's neuro-cognitive mechanisms as well as theories such as the construction integration model (Shapiro and Niederhauser 2004), suggest that if readers have no prior knowledge on a particular subject, then it is very difficult for them to create a situation model in which deep understanding and engagement can be achieved. In other words, prior knowledge encourages recognition of and engagement with a textbase, and in so doing can contribute to a richer situation model where an environment of meaningful learning is better promoted (Shapiro and Niederhauser 2004). According to Birkerts (1994), it is in exactly such an environment that the reader can begin to recognise and understand universal patterns, so that insight and wisdom might be created. No matter where s/he is from, with a literary app such as *Stories from Zimbabwe,* the opportunity exists for the reader to expand his or her knowledge base, from theoretical concepts such as

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colonialism, to more specific information such as data outlining the history of Robert Mugabe's political party, ZANU-PF. However, with a specific fiction such as *The Grass is Singing* – if a reader is able to engage with that work – the opportunity exists for wisdom to form. The danger is that the digital native – out of touch with the historical, political and social discourses at work in Lessing's novel – becomes disorientated in the text, and disengages. According to new media theorist, Dr. Ralf Schneider,

> [i]n terms of cognitive theory, disorientation may be explained by an inability to establish a satisfactory situation model quickly that will then serve as a framework in which the episode is expected to take place, providing a sort of skeleton structure to be fleshed out by further information (2005, p.200).

As well as disorientation, a weakening of specific skills associated with print literacy may also prevent the establishment of situation models. As mentioned in Chapter Five, one study found that, while they are adept in several online skills, digital natives are lacking in skills necessary to "create new meanings or new interpretations by combining pre-existing, independent shreds of information in any form of media" (Aviram & Eshet-Alkalia 2006, p.3).

Bearing these concerns in mind, the interface design proposed in this chapter (as well as the recommendation that, within the *Stories from Zimbabwe* app, *The Last Resort* should be read first) attempts to promote – from the reader's first contact – an immersive experience in which the embedded media are selected and positioned in order to promote faster cognitive assimilation. Further, the knowledge that readers acquire from their reading of *The Last Resort* is intended – in part – to prepare them for their reading of Lessing's novel. This model suggests that two primary texts can work together effectively, especially a fiction text and a nonfiction one. In this case, a more current and relevant nonfiction, where the opportunities for enhancement are more obvious, acts as a sort of Trojan horse, preparing the reader for an important work of fiction that might not otherwise have been read. In quickly developing a set of cognitive schemas around the key concepts of Zimbabwe and colonialism, the idea is that readers will not only be prepared for Lessing's fiction; they might also be open to engaging with it.

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Another method of promoting a digital reading space conducive to the formation of situation models is via the recommendation that a literary work can be accompanied by guides. In cases where the reader is engaging with a challenging text independently, as well as in cases where the reader lacks a satisfactory situation model, it is proposed that guides will be able to assist readers in a way that is both engaging and interactive. It is important to acknowledge that this thesis recommends a number of guides. The app in itself functions as a guide, but so do the primary literary texts, the authors, the narrative guides, and the owners (where applicable lecturers and other educators) of built-in, interactive forums.

Historically, one of the most pertinent concerns with the digital reading space has been the possibility (in many cases the probability) that the satellite media might inhibit concentrated and sustained reading, preventing hermeneutic immersion. In Chapter Three of this thesis I discussed just how radical experts expect the implications to be of multimodal digital environments, all engaging with a single reader at once (Carr 2010, p.125). Nicholas Carr suggests that readers cannot transfer the amount of information presented on most screens into their long-term memory, and the problem with that is it is within long-term memory that situation models and schemata are thought to form (p.125). A related problem has been referred to as "infomania" (Heim 1993), referring to the tendency of a person reading in the digital space to pursue fragmented units of information and, in so doing, become lost in insignificance. In the digital reading space the "text boundaries are no longer obvious" (Hillesund 2010, n.pag.), and, according to Schneider, "the allegedly liberating activity of choosing links may in fact merely activate additional self-monitoring thought processes, which may distract from the story itself" (2007, p.200).

The interface design proposed in this chapter suggests that the majority of supplementary media should be located at the end of each chapter, promoting an environment in which a single-focused and vertical engagement with the text can take place. A second design component is perhaps more critical: while the *Stories from Zimbabwe* app can be characterised as semi-permeable (readers can access social media such as Facebook or restricted videos which may only be viewable on a website outside of the app, like CNN), in actual fact the bulk of the media is stored and organised within the app itself. Furthermore, while readers have the option to access media via the menu on the homepage, each primary text has been designed to present the media at a point in reading that is deemed most relevant (so the media can be accessed in both a linear-progressive *and* a non-linear manner). It should

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also be noted that the media are stationary; after viewing a video or a poem, unless there is the option to share that media on a social network or add a comment to a forum, the reader is presented with the single option of returning to the primary text. If a reader chose to navigate to the homepage menu from the primary text, on returning – by clicking on *The Last Resort* icon for example – s/he would return to the page that was last read.

One might refer to these as protective elements of the interface design: their purpose is to protect an imaginary reading experience; protect a hermeneutic engagement with the text; and protect the reader from a state of infomania. In this design, the texts have been layered, but the journey of the reader has been carefully planned and, while this is very much a multimodal environment, the number of entry and exit points has been limited.

The proposal herein has been careful to suggest ways that qualities of traditional, paper-based reading can be carried forward into the digital reading space, but it is equally important to take into consideration research in Chapter Two, which suggests that a quality of Web 2.0 design is that the digital native "must be engaged" (Berk 2009, p.10). To repeat what a senior director at Penguin Group USA had to say,

> today's kids are not going to want to pick up a big book and spend hours in a corner silently, passively reading. Why in the world would they do that? It's not interactive. They can't share the experience with their friends. (Gomez 2009, p.97)

There should be no attempt to posit that *Stories from Zimbabwe* is a fully interactive literary application. Unlike the literary work *Chopsticks* (Penguin Group USA 2012), the primary texts (*The Last Resort* and *The Grass is Singing*) do not require the reader to interact with the screen to access components of the story. Nor is there any ability on the part of the reader to choose a scenario or make a decision related to the progression of the story. The interactive-ness of *Stories from Zimbabwe* is in the form of the interface design itself (readers are presented with an extensive multimodal menu on the homepage allowing them to *explore* the texts and their satellite media); the physical engagement with the screen (for example tapping the screen to activate a video of a narrative guide); and the social media and forums that provide readers access to various online communities in a number of ways.

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It is also worth mentioning that careful consideration has been given to the media that appear at the start of reading both *The Last Resort* and the *The Grass is Singing*. In Rogers's memoir, said media comes in the form of a video in which the Zimbabwean poet and African studies expert Amanda Hammar addresses the reader directly, providing an overview of the events leading up to the initial Zimbabwean farm invasions in 2000, before delivering a performance of her poem, *Zimbabwe Lost*. Shortly after Hammar's video foreword, the reader has the option to listen to a dramatised audio version of Rogers's initial telephone conversation with his mother, after learning of the murder of the first white Zimbabwean farmer. Similarly, in *The Grass is Singing* a video of a narrative guide directly addressing the reader is intended laconically to communicate to a digital native why reading Lessing's work may open up to them a set of "unique truths." In both cases the intention is to maximise the effectiveness of what is sometimes referred to as the "point of engagement" (O'Brien & Toms 2009, p.943). In this case, the purpose of the interface design is to include elements that might "capture participants' attention and interest" and then "move them forward into engagement" (O'Brien & Toms 2009, p.943). Formulated as a question, this thesis asks, is it possible to use the multimodal hypermedia that the digital native is more at home with, to deliver him or her into a state of engaged, concentrated reading with the primary text?

Another component – according to Web 2.0 methodology - of user engagement is feedback or "information communicated to users about actions that have occurred and results that have been achieved" (O'Brien & Toms 2009, p.944). In *Stories from Zimbabwe* the functionality would exist enabling the reader to "switch notifications on". If a digital native is using their reading device for reasons other than engaging with the *Stories from Zimbabwe* app, then notifications would appear on his or her screen that attempt to continually re-engage that individual. The majority of notifications would probably involve social media and the built-in forum, such as a message that indicates to a reader that his or her Professor has added a comment to the Doris Lessing Discussion Group, or the author Douglas Rogers "has commented on your post in *The Last Resort* Facebook group". However, notifications might also let the reader know if and when new media has been added or updated. In a work like *The Last Resort*, this may be in the form of a new video report covering the upcoming elections, or a new set of photographs showing the latest updates and renovations taking place at Drifters game farm and lodge.

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Lastly, I would like to return for a moment to Mark Kishego, one of the “guides” mentioned in Chapter Four of this thesis. Almost exactly halfway through Atavist’s nonfiction title, *My Mother’s Lover* (that is, in the narrative proper), the publishers included US government archived video footage from the 1940s of the Second Emergency Rescue Squadron (Dobson 2011). Kishego, a former World War II rescue squadron pilot, provides the commentary accompanying that video. As mentioned in Chapter Four, I was surprised at my own reaction to the video. I am not easily engaged by black and white videos, or programmes that would be found on the History Channel, but *My Mother’s Lover* had drawn me into World War II: I was completely immersed. What’s more, although one could argue that Kishego’s video interrupts the story, the effect it had on me was to bring me closer to the reality of the story’s characters. In isolation from each other, the story and the historical video held little power, but packaged as they were, they were able to heighten my immersion, and frame the reality of war more truthfully than any textbook or film ever had.

There is, then, in what is currently seen by so many as an “inane” digital space, the potential to bring the digital native back to what Sven Birkerts calls “a reconnaissance of selfhood” (1994, p.209). Digital natives might know more of the world if an environment is built that appeals, in part, to their online spirit, while at the same time continually drawing them back to a text that is intended to resonate inwardly.

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# CHAPTER SEVEN

## Conclusion

How a literary work might appear and function in a digital reading space is not a new question. Preeminent theorists such as Richard Lanham (1989), Jay David Bolter (1989) and George Landow (1989; 1991) were developing a critical electronic literature and hypertext discourse at the same time as innovators like Michael Joyce (1990) and Stuart Moulthrop (1992) were producing their first hypertext fictions. More recently – and with the advent of wireless internet connectivity, e-readers, and tablet computers – the discourse has grown beyond hypertext and interactive fiction to focus more on literary works that have been enhanced or "amplified" with hypermedia.

In some ways, though, the modus operandi of the digital reading space can be traced all the way back to American engineer and inventor Vannevar Bush. In his 1945 essay, "As We May Think", Bush discusses his idea for an information technology device that would change the way humans interact with information, and there is no doubt that Bush's vision was an early conception of what we refer to today as the World Wide Web (p.45). Although Bush was not discussing literature in particular, his prediction of what a future literature-carrying technology might look like was remarkably prophetic:

> Consider a future device for individual use, which is a sort of mechanized private file and library. It needs a name, and, to coin one at random, "memex" will do. A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory. (1945, p.45)

Bush was interested in a technology that would allow humankind to store knowledge in a digital space, and then meaningfully engage with that knowledge by organising it, using a system of "associative indexing" (1945, p.45). According to Bush's vision, the technology should allow the user to build "trails" of interest "through the maze of materials available to him" (1945, p.46).

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Putting aside for now comparisons between Bush's memex and a tablet device, what is most interesting about "As We May Think" is less the technology, and more the vision. In the case of the memex, the hypothetical objectives of the device did not include benefits such as "efficiency" or "connectivity" or similar marketing buzzwords associated with modern-day technology launches. Rather, Bush saw the device for its beneficent possibilities and argued that "[p]resumably man's spirit should be elevated if he can better review his shady past and analyse more completely and objectively his present problems" (1945, p.45). In other words, Bush's vision saw technology as allowing humankind systematically to organise knowledge, using tools such as associative indexing, to create trails that would allow greater access to life's bigger patterns.

This thesis has proposed a literary application, *Stories from Zimbabwe*, in which Douglas Rogers's memoir, *The Last Resort* (2009), and Doris Lessing's novel, *The Grass is Singing* (1950), are packaged, together, into a digital reading space where they are enhanced to include a variety of hypermedia. In this regard, I would like to draw two important deductions from Vannevar Bush's "As We May Think" (1945).

First, the position of this thesis has been to suggest that a critical vision (or visions) of the purpose and nature of digital enhancements to literary works should be advanced by the guardians of the literary tradition ahead of polemics about the mechanics of technology and its associated software.

A clear set of objectives needs to be in place so that the technology – and its accompanying "infomania" – is not allowed to guide and *design* itself. Left to their own devices, technologists might enhance for enhancement's sake. Prior to any strategic vision for digital enhancement, we might ask: from the perspective of the literary tradition, what is the purpose, if any, of enhancing a literary work, and, if it is necessary to engage readers with literature in a digital reading space, how might this purpose be executed in a way that protects both the qualities of traditional paper-based reading, and the existing archive of print literature?

The second deduction focuses on Bush's proposition that if information systems were to be organised and accessed in a specific way, an extraordinary implication might be humankind's ability – historically and philosophically – to better understand itself.

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In this sense we should view literature – regardless of the technology in which it is presented – as a construct that shares some of the properties of the information system proposed by Bush: it is a sophisticated information system in which the reader has the opportunity to carve trails of association which might allow him or her to form richer insights and wisdom, as happened in my own reading of *Lord of the Flies* (1954) and *Beloved* (1997).

Packaged within *Stories from Zimbabwe* would be two literary works - *The Last Resort* and *The Grass is Singing* – and both should be regarded as information systems in their own right. Over and above the autonomy of the primary texts, though, in *Stories from Zimbabwe* an information *eco*-system would exist that made use of associative indexing to build a guided trail through selected satellite media. Within the app, associated trails would be laid linking each of the primary texts to strategically placed supplementary media. In addition, beyond the individual hypermedia information systems pertaining to each of the primary texts, an interface has been suggested – within the eco-system of the app as a whole – which would create an opportunity to create trails of meaning, or connections, between the primary texts themselves. Using technology to organise several independent information systems together in one system, *Stories from Zimbabwe* attempts to slice "through the layers ... [to allow] unique and even surprising ways to link material" (Heba 1997, p.39.).[10]

In summary, this thesis has argued that a set of formalised conventions (such as "in-line extras") and instructional design methodologies (such as the inclusion of guides) for enhanced literary works should be based on a vision that begins by asking: what is the value of literature for human beings? In Bush's vision for the future of information technology and, more specifically, the memex, the vision is to elevate the human spirit and create an environment in which humanity might access a more aggregated understanding of itself. In fact, that vision is not so different from Sven Birkerts's "vision" for literature:

> In the humanities, knowledge is a means, yes, but it is a means less to instrumental application than to something more nebulous: understanding. We study history or

[10] It is worth mentioning that unlike the memex or the internet, in which the user builds his or her own trails of interest "through the maze of materials available to him", in *Stories from Zimbabwe*, the instructional design includes layers of guides intended to prevent the reader from becoming lost in "infomania".

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> literature or classics in order to compose and refine a narrative, or a set of narratives about what the human world used to be like, about how the world came to be as it is, and about what we have been – and are – like as psychological or spiritual creatures. (1994, p.136)

Only once a critical mass among the literary establishment has agreed to a vision for on-screen literature can we start working towards a formal set (or sets) of conventions for reading in the digital space. For now, working on the assumption that the purpose of formalised conventions in a digital reading space is to allow humans to continue accessing "the universal patterns within fiction's plots" (Birkerts 1994, p.89), we might be in a better position to formulate some of more particular concerns: how would an enhanced literary product engage the digital native in an online and on-screen environment to which he or she is more accustomed; how would the product's interface protect an imaginative, continuous and deep reading experience; and, how would the product's tools ensure that digital natives were able to access past and/or obscure literatures and their relevance?

Using the broad outlines of such a vision as a starting-point, and a formalised set of digital reading conventions as more specific beacons, the process of creating explicit methodologies for instructional design should become more focused. Such foci might include: directions on how and where to place hypermedia within the digital reading space of a literary work; strategies for ensuring that a process of mentoring or co-regulation is effectively utilised; guidelines for the incorporation of engagement and interactivity tools; and standards for the permeability of the app as a whole (how to strike a balance between an "open" and a "closed" online digital reading environment).

The vision, purposes and concerns of a formalised set of conventions, and their accompanying instructional design should then allow for an environment which supports "calm, linear thought" for deep attention, while simultaneously allowing the reader to "speedily locate, categorize, and assess disparate bits of information in a variety of forms" (Carr 2010, p.142). In this *instructional* digital reading space, the reader should be taking advantage of pre-frontal regions of the brain (used for decision-making and problem-solving), as well as areas of the brain associated with language, memory and situation model learning. This is a reading space in which the digital native forms cohesive meaning from a variety of legitimate sources. In essence, the vision looks to create a "writing culture" online that is

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capable of mediating "journeys that might add to a reader's understanding" (Stroupe 2007, p.422).

A prerequisite of the model proposed here is that the literary establishment – including publishers, literary technologists, academics, and authors – stop offering commentary on how the available technologies, software and apps are using literature, and start commenting instead on how literature should be using them.

How the aesthetics of literary presentation in the digital reading space might evolve is, in the final analysis, not as important a question as one might think. The argument presented here assumes that if the literary establishment can shift their focus from *how the technology can use the literature* to *how the literature can use the technology*, and begin that investigation with a strategic vision, then authors like Doris Lessing and Zoë Wicomb, and literary theorists such as Sven Birkerts might find they have much less to worry about. Naturally, a large amount of the research and development in years to come will focus on new fictions, created from inception for the digital reading space; fictions in which hermeneutic immersion is dependent on more than the text alone. However, it is imperative that we do not forget the literary works which already make up a significant portion of the human archive and which exist on paper only. In particular, the opportunity exists to use the latest technologies to emancipate literary works which might increasingly be finding themselves "stuck" in the archives of print; the vision proposed here might find ways to reconnect digital natives to the relevance of such works. *Stories from Zimbabwe* is an attempt to do just that: stripping away the distractions of the print versus electronic polemics, it is a proposed literary "re-launch" inspired first and foremost by literature's potential to connect readers to the collective unconscious, and the experience, of humankind, to cathect readers to what Alvin Kernan (1973) would no doubt refer to as the mythologies that have shaped our cultural revolution. In many ways, *Stories from Zimbabwe* is an attempt to reinvigorate Vannevar Bush's original vision for the memex.

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