

**FROM THE SCREEN TO THE PAGE: A QUALITATIVE STUDY OF  
READING EXPERIENCES OF UNIVERSITY FACULTY**

by

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B.A. UNB 2012/B.Ed UNB 2012

A Thesis Submitted in Partial Fulfillment  
of the Requirements for the Degree of

**Master of Education**

in the Graduate Academic Unit of Education

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**This thesis is accepted by the  
Dean of Graduate Studies**

THE UNIVERSITY OF NEW BRUNSWICK

April, 2015

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## **ABSTRACT**

This thesis explores the reading experiences of academics in various faculties at the University of New Brunswick. The project investigates how academics practice and experience reading through the two main media—that is, the digital medium (such as computer screens, tablets and e-readers) and the more traditional one of the printed word (such as books, journals and other paper documents). Using the qualitative method, I conducted interviews with eight professors representing a wide variety of disciplines across UNB. Investigating the reading behaviours and the choice of one medium over another for certain professional and personal activities, this study attempts to discover the rationale behind these academics' personal reading preferences. This study offers strong empirical evidence that supports the claim that academics make decisions about the medium of their choice based on the type of activity they are engaged in and the general practicality and convenience offered by the medium itself.

## **DEDICATION**

To the members of my family: to them I owe everything.

## **ACKNOWLEDGEMENTS**

This work would have been impossible to undertake and complete were it not for Dr. Ellen Rose: Her academic work and a class I took with her in the winter of 2013 suggested the topic for my thesis; her dedication to teaching and research provided an exceptional model for a struggling graduate student; and her guidance, support, and expert advice made it possible for me to stay the course.

## Table of Contents

ABSTRACT.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
Table of Contents.....	v
INTRODUCTION.....	1
1. From the Typographic to the Digital Reader.....	1
2. Personal Reflection: “A Place of Power”.....	4
LITERATURE REVIEW.....	10
1. Onscreen and Online Reading: A Theoretical Ground.....	10
2. The Pro/Con Debate.....	15
3. Research Comparing Page and Screen Reading.....	20
METHODOLOGY.....	29
1. Beginnings.....	29
2. The Qualitative Research Paradigm.....	32
3. Research Design.....	37
RESULTS.....	44
CONCLUSION.....	75
Bibliography.....	89
APPENDIX I.....	108
APPENDIX II.....	113
Curriculum Vitae	

# INTRODUCTION

## 1. From the Typographic to the Digital Reader

Reading on paper as opposed to reading onscreen is a choice we are often asked to make these days—and increasingly so. Which of these two ways is preferable? Are there certain readers who are more likely than others to choose one over the other? And what is the impact of reading online as opposed to reading on paper? I would like to begin this discussion with a personal admission that illuminates my own biases at the same time that it reveals the complexity of the question. Personally, when I read for pleasure (short stories or novels or essays), I tend to gravitate towards the printed book. The main reason for this is that when I read a book on paper, I feel as though (and I do understand that this might be more of a feeling than real) I am more in control of my reading pace and also that the rate or degree of my retention of the materials and facts therein is higher and deeper compared to when I try to read the same materials onscreen. Having said that, I must also mention that, in my view, it is impossible to read the same materials onscreen as on paper since, to read Marshall McLuhan's dictum in the most simple-minded fashion, "the medium is the message." In other words, the nature of onscreen presentation is such that written material that shares the screen with shapes and sounds (appealing to the senses of sight, kinesthetic/movement and sound) is impossible for the reader to consider as identical to its printed equivalent, which exists on a single page or surface or dimension and appeals to one sense, that of sight. Arguably, the haptic or tactile sense is also involved since a reader must hold the book in her or his hands and touch the paper in order to flip the printed page.

I do realize, of course, that my ability to retain information more readily when reading on paper may or may not be a matter of the reading medium. On the other hand, it could very well be that one medium offers a more personal, contained, solitary site that is more conducive to attention, retention, and even the conveyance (and enjoyment) of certain types of information as opposed to onscreen reading (on tablets or computer screens and so on). The latter, I would argue, offers more opportunity for the kind of distraction (advertisements, social media messages, e-mail notifications, musical and other sounds and so on) that we often associate (whether it's the case or not) with reading on a surface that is part of a connected environment.

The research I have conducted involves the nature and outcomes of the reading experience when different media are used, whether these be electronic reading done on the screen (i.e. computer screens, tablets, smart phones and e-readers) or the more traditional media of the printed text (i.e. books, newspapers and other printed texts). Studying the impact the materiality of the text has on the reading experience and the reader herself is not a new endeavour; however, the advent of rapidly changing reading technologies that facilitate subsequent emergent and radical shifts in the very nature of reading have made such research more critical today than at any other period of humanity's history.

As I go on to indicate in my literature review below, there is substantial research and scholarship produced on this topic. There is also, as perhaps should be anticipated, a considerable range of findings and conclusions when it comes to an evaluation of the value of various media, especially of the differences between reading electronic text versus reading typographic or printed text. My specific purpose throughout my research

and study, nonetheless, has not been to determine which medium is the “best” or more desirable for readers but rather to explore and attempt to arrive at a better understanding of the very nature (and the possible differences) of the experience of reading when this reading is conducted using a print or an electronic format. Even more specifically, my research has been designed to consider the impact of reading on the thinking mind and whether it is likely that one kind of reading encourages linear presentation of information, reflection, contemplation and uninterrupted thinking while the other hinders such “deep” thinking by virtue of favouring non-linear reading, multiple information sources, various triggers for the arrival of social and other media, and so on. Putting it very simply but succinctly, the research question I address here involves the different ways in which the mind of the reader is stimulated, impacted, influenced, or even “manipulated” when reading print as opposed to reading digital text displayed on a screen. My specific research questions are the following: Is there a difference in the reading experience when it is performed using a printed text as opposed to an electronic tablet or screen? Assuming that there is a difference, on what basis do readers make decisions about the choice of medium they use in reading specific texts? This difference has been documented through the eyes and minds of readers/research participants: Their responses to my questions and my analysis of what they said to me during the interviews I conducted was designed with the view of interrogating, synthesizing, discussing and reflecting upon the nature and degree of that difference in the reading experience based on choice of reading medium. In order to assess reading differences and choices of medium as these are experienced and reflected upon by readers, I have focused on the reading habits specifically associated with academic faculty at the university level. This

research, then, has been designed as a qualitative study investigating the experiences of a small group of academic faculty members at the University of New Brunswick.

It is important to note, of course, that any discussion of this topic is really a meta-discussion that begins with adopting and/or adapting Marshall McLuhan's theories articulated in his work published as far back as the 1960s, including the ideas and complex contexts behind his celebrated phrase "the medium is the message," a probe which helps explain how, in McLuhan's view, the arrival of post-printing technology was to drive into extinction the printed word and other "Gutenberg galaxy" technologies developed by "typographic man." A careful consideration of his work reveals that, long before the development of many of the electronic applications under scrutiny in this study were ever more than ideas and futuristic concepts, McLuhan provided the foundations and the raw materials and ideas for current and even opposing views regarding the use and usefulness of technology. Seemingly wrong about the "typographical man's" survival, McLuhan was—already in the 1960s—providing all the necessary theoretical tools needed for penetrating and making sense of my research question.

## **2. Personal Reflection: "A Place of Power"**

Reading in 2015 constitutes a much more versatile method of receiving, absorbing, and encountering information, researching topics, and communicating with others than did reading even a decade ago. Although we still use the printed text in the form of novels, textbooks, newspapers, reports, essays, articles and so on, we can turn a blind eye to an ever-growing conversion of these media into digital forms only at our

peril. And it is not only newspapers and magazines that are offered online now but also classic novels that can be found on any Kindle or iPad device and accessed both conveniently and readily. And who but the most “technophobic” antiquarians can resist the temptation of taking along on a long flight to some distant land a Kindle device or an iPad with twenty favourite novels when the alternative is to either take a single volume of Dickens or risk a bad back?

Personally, I can see the ways in which my reading habits in my daily life are affected by the variety and transformation in how the written word is made available to me. In both my own academic work and leisure activities, I find myself increasingly using online sources for my reading. For instance, when it comes to news, I occasionally glance at a newspaper when it is accessible and it is convenient to do so; but for the most part, I receive the majority of my news through the Internet and social media services. As well, whenever a peer of mine wishes to send me an article of interest, it invariably arrives in the form of an e-mail attachment or Facebook post. Whether I like it or not, screen reading is becoming a bigger part of my life (as it is for most people)—and it would appear that this is just something with which all of us are going to have to become more accustomed.

Granted, when I encounter a piece of work which I need to “digest” mentally, I almost always print a hard copy and use a pencil to write on the page, making notes, flipping back and forth to various pages as needed, comparing one point to another, discovering continuities and sometimes flaws in logic. But, at times, when working with multiple texts at once, it seems more convenient to have these pages illuminated on my own computer screen, which makes jumping back and forth between several texts easier.

This is especially true of when I am trying to decide what I need to research more deeply and what specific passages I may need to quote from several texts.

When on occasion I am reading and writing online, I am always wondering if I am losing some important piece of the information I am trying to decipher and, even more so, if I am missing something because of all the other distracting technologies that are vying for my attention simultaneously—even when I am working offline. Frequently (and increasingly more frequently these days), I catch myself being distracted by an alert from my computer monitor or my iPhone. This happens, for instance, when I have just received an e-mail notification or a friend's request on Facebook. I see this kind of digital environment—where one has so much information available to her/him at the stroke of a key, but also so many distractions to go along with this—as a rather paradoxical or even oxymoronic situation or site for the contending demands on one's attention.

My father once told me of one of his literature professors, a specialist in the work of Blake and Romanticism, who told his classes over the years that every student of literature needed “a place of power.” Presumably, the same would be true of all students, no matter what their discipline. This professor described this place of power, in which one would be empowered to do her/his best possible work, as a small room with a desk or even an apartment or home corner in which the student could escape from her/his daily routine and focus on the task at hand (reading Blake, reading Dickens, reading poststructuralist theory, reading histories of reading, contemplating the structure of an essay, writing, proofreading—doing what a literature and language student does) without any interruption or external impositions upon the solitary landscape entered by the thinking, reflecting mind. Though he never made the connection between this reading and

writing “best practice” paradigm and the “greater romantic lyric” (he likely wanted his students to make this connection on their own, even if this took years to be accomplished), I think (or am told) of that “place of power” and the romantic poem as being the same thing. After all, a poem like William Wordsworth’s “Tintern Abbey” is as much about nature’s role in the opening up of the mind and of memory’s nurturing landscape as it is about allowing the poet to escape the everyday and enter a space in which remembrance, thinking, reflection, contemplation—all the delectable fruits of the imagination—are possible for a brief space before the demands of modern life bring him back to a busy, noisy world of abundance and the overfeeding of the ears and eyes if not the mind. Is such a “place of power” possible for us today?

To get back to my subject proper, the use of the computer makes accessing information seemingly effortless and allows for the simultaneous access of a variety of texts co-existing on a single screen. As well, the use of the computer, with all it offers to my senses, makes it seem easier to integrate what I am reading with what I am thinking, quickly and without great effort, into a document. This kind of comfortableness and convenience that the computer screen offers may have an effect (it must) on the way the user/reader processes information. I have no doubt in my mind that the level of concentration I have when working and reading on the computer screen is of lower intensity compared to when I read books printed on paper and bound together by thread and glue. This—along with a combination of using writing instruments such as pencils and pens to mark passages on the paper and to underline words and phrases of key interest—creates a much more intimate and focused process that facilitates more concentrated thinking and writing.

As a haptic learner, I find that when I have a printed book in front of me, when I am holding it in my hands, I am able to turn the pages and see the printed work physically present on the page, something that allows me to establish a connection with the information (the “message”?) offered on that page. This may be something peculiar to me and part of my own learning style; however, I find that the ability to touch and turn the pages helps considerably when trying to remember certain ideas and passages from a piece of work or, in this case, from a piece of paper.

But even when I have an open, printed book in front of me and am working with paper and pencil, distractions are often plentiful. The distractions presented by sounds and images notifying me of new messages or news alerts are, thus, another matter. How does one eliminate them? How does one conjure up “a place of power,” a kind of “kingdom of the imagination,” whose principal rule is the outlawing of all things digital so that only a single medium, that of the printed text, is allowed? How does one convince oneself that “reading” proper requires the blocking out of all distractions so that the mind may stay on topic and focus on the ideas at hand? Another way of asking these questions would be to think about whether “real” reading is possible in a digital environment—or how does one maintain focus in a digital environment?

In the interest of my research questions, I have had to engage my research participants in a conversation about their reading habits—and I am sure that this exchange has allowed me to learn much about them as readers (and about myself as reader) in terms of what they perceive as the influence upon their minds and lives of changing reading environments. Lest I think that the momentous change brought about by reading onscreen has no precedent, I must remind myself that twenty-five centuries

ago Plato asked the same question with his dismissal of the poets from the Athenian Republic. It has been suggested (Ong 80) that what Plato was doing was rejecting the old, oral culture based on sound, repetition and association and ushering in a new world based not so much on acoustic patterning as a mnemonic device but rather on the visual and the alphabetic—on reading characters appearing on a “page” and appealing to the reader’s visual sensibility. It is worth remembering, then, that going from print to the screen does not involve such a sea change as going from oral culture to print—or does it?

# LITERATURE REVIEW

## 1. Onscreen and Online Reading: A Theoretical Ground

This thesis begins with the understanding of an indisputable fact: In recent years, more and more reading takes place onscreen and online. This being by now a truism—in this, our technologically advanced age—there is an attendant question that is of considerable significance: Is there a difference in the nature of the reading experience (whether by nature we mean enjoyment, comprehension, retention, remembering, intellectual engagement, or pedagogical value, whatever that may be) when it is performed using a printed text or an electronic tablet or screen? Moreover, if there is a difference, can it be described, explicated, or at least discussed in an effort to begin understanding it? And if a fundamental aspect of reading involves the ability to comprehend the information displayed on the page and apply acquired knowledge to diverse contexts, does one reading medium facilitate good reading practices and outcomes better than another one? With these questions in mind, I have proposed to ground my inquiry within a consideration of two main (but not necessarily mutually exclusive theories) that offer unique perspectives on our media-saturated world and the reading experience within it. Both theories begin—as many theories about the impact of technology on modern culture do—with Marshall McLuhan’s foundational work of the 1960s and are posited on the idea of shift in reading media and habits in terms of displacement.

The first theory was formulated by Walter Ong who, along with his followers, views new media as displacing older ones and as producing fundamental epistemological transformation. Ong draws, then, on McLuhan’s assumptions—especially in

*Understanding Media*—regarding the connections between new technologies and their uses, emphasizing that shifts in the media of communication introduce concomitant restructuring of “man’s sense of the universe in which he lives and his very sense of what his thought itself is” (Ong, *In the Human Grain* 4). Following Ong, more recent critics have gone so far as to claim that onscreen reading creates attention shifts that also alter the reader’s epistemology (Mayer; Cline). Additionally, more recent work begins, even when it does not acknowledge it, with Ong’s suggestion that technology (and thus reading technology) alters the physical makeup of our brains and thus changes not only the ways we read (epistemology) but also the way we and our brains operate and simply “are” (ontology)—that is, the way our brains experience our world following our encounters with that world through the mediation of new technologies. Accordingly, recent research based on the study of the brain seeks to demonstrate the impact of digital technology’s retooling or rewriting and building new neural pathways in our brains, altering our brains and, thus, the way we experience ourselves and our world (Wolf).

As a case in point, the notion involving alterations in the human brain brought about by technological changes is pointed out emphatically in the telling subtitle of a 2010 book by Nicholas Carr: *The Shallows: How the Internet is Changing the Way We Think, Read and Remember*. In fact, the front cover of this book is even more telling since one of the central foci of the book is outlined for all to see and think about: Against a red background, there is a simple, austere drawn side shot of a head containing the outline of a brain which is connected by a two-way cable to a computer outlet. Obviously, the human brain that has created the computer is impacted in some way by the information and sensory triggers the computer displays and makes available to it. So, is

the brain changed in some way by the electronic triggers it receives from the computers and vice versa? Based on recent research, Carr and others are arguing that the brain, indeed, has always altered to accommodate external experience.

On the other hand, in their “remediation” theory, Jay David Bolter and Richard Grusin interrogate Ong’s theory by placing the emphasis on a slightly different aspect of “seeing”: they argue that a new medium does not displace older ones in the sense of erasing them but, instead, imports them and critically refashions them. We need to remember here that, besides “the medium is the message,” McLuhan has also said that “the ‘content’ of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph” (*Understanding New Media* 23-23). This concept is not lost on Bolter and Grusin who conceive new media not so much as radical departures from the past (as Ong and his followers are likely to do) but simply as “re-mediating” old media in distinctive ways. In *Remediation: Understanding New Media* and various articles, Bolter and Grusin first challenge the assumption that, in order to generate aesthetic and cultural principles, digital technologies must deny earlier technologies.

The critical difference between these two approaches could be understood, I think, through the metaphor of the palimpsest, a term defined by the *Oxford English Dictionary* in this way: “A [palimpsest is a] parchment or other writing surface on which the original text has been effaced or partially erased, and then overwritten by another; a manuscript in which later writing has been superimposed on earlier (effaced) writing.” While Ong’s theory views a new medium in terms of erasure, Bolter and Grusin’s more complex approach sees a new medium as one that displaces and refashions earlier

versions without, however, removing or obliterating them from the viewing surface, the page or the screen.

Another way of thinking about shifts in reading environments involves a phenomenological approach like the one employed by Jennifer Rowsell. Though there is no space here for a detailed look at Rowsell's work, it's useful to look at one point she makes about the differences in the haptic experience between print and screen reading:

To be an attentive iPad reader differs from being an attentive book reader. Though reading words in a book and text on an iPad are not radically different processes, there are ways of differentiating the experiences. An attentive book reader encounters pages that are bound and turns pages that contain visuals and words.

An iPad reader, on the other hand, touches, taps, scrolls, moves in and out of, and expands texts—touch is more invoked and dominates engagement more. (122)

Rowsell begins, then, with the notion that “reading is reading,” whether one is looking at a page or a screen; however, the shift in medium represents a shift also in the way we interact and read texts since, she points out, the iPad reader interacts through touch much more intensely than does the reader of print. For Rowsell, the very experience of reading changes when one shifts to reading on a device such as an iPad due to the fact that touch and interaction are much more prominent in reading experienced through the medium of the screen or tablet. Rowsell's approach thus questions mine in this thesis since I privilege what I see as the haptic experience in reading print while she points to a different kind of haptic experience that has developed rapidly over the past few years with the emergence of touch technology. Nonetheless, I still would maintain that though both of these experiences (touching a page and touching a screen) are based

on the haptic sense, they are also very different kinds of sense experiences and result in producing different sensations and environments—differences that would constitute a topic for another thesis.

As I will go on to discuss in some detail in my Methodology section below, this difference between these two theories (by Ong on one hand and Bolter and Grusin on the other) is tested in this thesis in terms of my discussions with my research participants. Consequently, one of the points I address here is whether readers feel that moving from print to onscreen reading involves a conceptual and intellectual act whereby the aesthetics of continuity and the mnemonics of presence that are part of print reading are erased once the shift to screen reading has taken place or, on the other hand, whether these readers feel that onscreen reading is a medium that offers new ways of experiencing a text without, however, sacrificing old content that is replaced but not totally displaced or expunged.

## **2. The Pro/Con Debate**

Anyone attempting to come to terms with the literature related to print and screen reading must first confront the plethora of opinion on what all this means (Barker & Tucker; Burge & Roberts; Carr; Tapscott); and yet it would seem that solid, verified research lags behind—or at least research that provides sufficient evidence to allow us to form assumptions and hypotheses about which we can be confident. Inconclusive and possibly biased, research into reading preference and experience continues to be divided between those who praise the benefits of onscreen reading and those who wax nostalgic about the advantages of print reading. Nor does it seem that this research can be aligned along the two theories of reading explored above: the Ongian perspective on technology that views a new medium in terms of erasure and Bolter and Grusin’s perspective that views it in terms of replacing and overlaying.

That the Ong/Bolter and Grusin theoretical continuum is not reproduced in the “pro” and “con” debate on print/screen reading may be gleaned from a look at the substantial new-media research during the 1990s devoted to “interactivity,” a notion which includes human to human but also person to machine or system (computer) communication (Barker and Tucker, 1990; Szuprowicz, 1995; Hoffman and Novak, 1996; Kayany, Wotring, and Forrest, 1996; and Stromer-Galley, 2000). The pedagogical implications of person or student to machine/system interaction, with the possibility for communication dominated by a program or controlled, let us say, by artificial intelligence, are as complicated as they are ominous. For my purposes, nonetheless, “interactivity” is mentioned here as one of the many ways in which ongoing research complicates questions which must remain central to my qualitative investigation: Is

interactive screened hypertext identical to printed text as a reading surface? How is the nature of the reading experience affected by the medium? These are the critical questions I have sought to gain some understanding into through my preparatory reading leading to the planning and execution of my MEd. research.

The pro side of the pro-con debate is informed by the assumption that today's pedagogy can be vastly improved by teachers' and learners' use of an ever changing and, presumably, ever improving technology. Pilot programs are aplenty whereby entire grades or even entire schools are provided with desktops, laptops or e-readers in an effort to enhance learning environments and learning outcomes. Such projects are motivated by the belief that—compared to traditional methods—technology-assisted teaching and learning offer superior experience and outcomes (Buckingham; Foehr; Harrison; Landow; Manguel; Negroponte; Schembaum and Siemens; Raab; Ragen; Stoicheff and Taylor). The upshot is that even though more and more of the texts readers, both casual and professional, encounter today are digital, we have yet to understand how this shift in reading medium affects comprehension and appreciation. In any event, my point here is that research, methodologies and even findings have much to do with the researcher's *a priori* assumptions and biases, whether the methodology is qualitative or quantitative.<sup>1</sup> I

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<sup>1</sup> Indeed, thinking about qualitative research (since that has been my approach here), I should admit without hesitation that one of its fundamental premises is that it involves subjectivity and biases. I discuss this point in a little more detail in my Methodology chapter below.

would go so far as to say that my reading in this area suggests that there is a pro/con dichotomy in people's views about technology generally and screen versus page reading specifically. Researchers exist within this debate, and it's hard for them to enter into their research without bias in one direction or another.

Arguments for the benefits technology makes available to learning and reading being—as already suggested—plentiful, those on the “con” side are strongly opposed to the view of technology as a panacea, a vehicle of ever-improving pedagogical outcomes, and remind us of the possibility for the presence of drawbacks. For instance, Ellen Rose—who elsewhere identifies herself as both an educational technologist and a media ecologist” (“Should you be a Media Ecologist?”)—speaks of an “Age of Interruption.” This “interruption” Rose is interested in is the kind of inattention fostered by today's constant connectivity which, when it comes to reading, may bring about certain “consequences [that] are bound to be significant, because we know that learning cannot take place unless the learner is intellectually engaged, present in more than just body” (“Continuous Partial Attention” 19; see also work by Carr, Ellul, Mumford; Postman; and Yeaman). Rose and other commentators caution that technology (in this case, online reading) may represent an obstacle to (rather than an enhancement of) the reading experience.

Based on a re-reading of McLuhan, Ong and his followers, Bolter and Grusin's work on remediation as well as recent work on “media ecology” (Cassidy; Yeaman; Rose, “Should you be a Media Ecologist?”), and a number of twentieth-century theorists of the written or spoken language (for instance, Jacques Derrida in *Of Grammatology* and Nelson Goodman in *Languages of Art*), I wish to transcend this pro-con debate by

developing a context and a theoretical typography which will frame my inquiry. For instance, I wish to investigate how reading is experienced by those who may be inundated by the digital medium, its resources and capabilities, and its biases—and the degree to which they are aware of technology’s (often unobtrusive but persistent) presence and the ways in which it may change the reading experience and what takes place within it. Since thinking critically about the medium is of utmost importance, are readers “encouraged” to forget that they are reading onscreen?

It is of some help, perhaps, to conclude this brief description of the pro/con debate by restating and clarifying my overarching research question. I have suggested all along that the on-going research on reading is inconclusive. What I may not have made as clear as it needs to be made is also the fact that very little of this research is focused on those who “read for a living.” The research participants I have in mind for this investigation are university-level teachers and researchers who have been greatly affected by the movement from print to screen reading. The key research question I am interested in, then, is what a representative group of university teachers at UNB think about the differences between their print and online reading?

I do not wish to claim that no research has been conducted into how academics (and their students) read in print and electronic media. However, the studies of which I am aware (and discuss briefly in my literature review) are invariably quantitative ones and based entirely on surveys or questionnaires. The information collected by having individuals respond to a number of set questions has allowed researchers to come to certain useful conclusions and produce answers based on statistics and trends. Thus, reading habits in certain reading environments and fields of study have been described

along with such information as age demographics and other pertinent factors that contribute to readers' preferences of media.

Nonetheless, quantitative work of the kind that has been conducted so far misses the opportunity that is afforded by the kind of qualitative research I have undertaken to conduct in this thesis. There are two advantages to research based on a qualitative approach: First, quantitative questionnaires lack the flexibility of qualitative work since the former pose one question after another and record one answer after another without any possibility for taking into consideration any initiative or thought process or intimation that has the respondent as its source. And second, quantitative research, unlike qualitative studies, lacks the ability to probe the respondent in terms of the experience she undergoes while reading. Indeed, the qualitative approach I have used in my own research has allowed for a more nuanced understanding of how my subjects experience reading through various media and how this experience is understood in terms of what they read and where they read. An ample amount of statistical information has been covered in the existing research; but a more personal and relaxed interview process during which the interviewee is empowered to contribute to the process of describing her experience in reading in print and/or online offers a better opportunity for an understanding of the nature of the reader's experience, filling thus some of the gaps the existing research simply cannot articulate quantitatively.

### **3. Research Comparing Page and Screen Reading**

Research comparing page and screen reading goes back to the 1990s. Much of the early research has to do with the nature and benefits or limitations of hypertext reading (Jaynes; Slatin; Charney). For example, in “The Impact of Hypertext on Processes of Reading and Writing,” Davida Charney focuses on the constraints of standard print media, pointing out that such constraints, including linear reading, are lifted when online texts are “presented in hypertexts that link together individual bits of text and even whole documents” (1-2).

More recently, as more reading of articles and books moves online, there has been an increase in research on differences between page and screen in terms of readability (e.g., Woody. et. al.) and comprehension (e.g., Coiro, Brown). Much of this research has focused on young readers (see especially the publications of UNB professor J. Douglas Willms and his research group, and Coiro and Dobler) and college students (Woody, Daniel, and Baker) so that, with few exceptions (for instance, Leyva), the topic of how those who “read for a living” experience the differences between print and online reading and what they say about it when given the opportunity to reflect upon it has not been adequately explored. An important passage in an article by Menzies and Newson demonstrates a trend in academic reading according to which “an overwhelming majority (65% of both men and women) reported that they are not reading as deeply and reflectively as they used to or as they want to. Nor are they reading as broadly and inter-disciplinarily as they used to or as they’d like to. Instead, they are scanning, mining sources for selective bits of information” (90). This shift in reading habits is the gap I discuss below and the one I address in my own research.

Interestingly, I have been able to locate but few studies addressing explicitly and helpfully my topic of online and offline reading habits of university professors. A number of works, several of them quite recent, seem at first—especially in terms of promising titles—to address my topic but turn out to be quite different from my own research in terms of target subjects and methodology. My claim, then, in mentioning a number of these works is that, unlike my own research, the following studies—by scholars working in various parts of the Western world—employ quantitative methodologies and, for the most part, address university professors as subjects/participants belonging to groups that include graduate and sometimes undergraduate students to the point that the questions asked and the data gathered belong more to a general university population rather than to a specific group of “university professors.”

“Changes in Faculty Reading Behaviours: The Impact of Electronic Journals on the University of Georgia” (2003) constitutes a questionnaire-based survey by Erin T. Smith.. In her work, Smith looks at the academic staff at her university from both the science and the social science departments. She is able to suggest some interesting trends relating to both the rank of the respondents and their area of discipline. In the early part of the first decade of the twenty-first century, personal print subscriptions still had a large impact on how academics approached their scholarly work, although a growing usage of electronic journals is noticed by faculty in both disciplinary areas. However, science faculty members were more likely to use electronic journals compared to their colleagues in the social sciences. Thus, social scientists were more likely to use more print based work although, overall and in terms of statistics, a rise was noticed in the use of electronic texts being accessed by both groups. Perhaps the most interesting (but not

surprising) finding is that the survey reports a difference determined by rank since electronic texts are said to be used more frequently by junior faculty members (i.e. assistant professors) as opposed to more senior (and likely older), full-time professors.

Conducted by Ian Rowlands and fellow researchers at the University College, London, “What do faculty and students really think about e-books?” (2007), used an e-mail invitation to the institution’s academic staff and students with the view of gaining a perspective on their attitudes on e-books and electronic resources. This survey points to various ways user uptake and acceptance of e-books may be encouraged by publishers and librarians. Not unexpectedly, this research considers information service delivery and academics’ and students’ access to both print and electronic resources from both institution libraries as well as other sources. The study concludes by looking at “purpose of reading” and makes the important distinction that, according to the respondents, leisure materials tend to be accessed electronically while work- and study-related readings are more often done using printed text. This study also investigates the concept of “book discovery”: In the study’s findings, the authors point out that readers employ different strategies at different times to meet different kinds of information needs.

“Use and users of electronic journals at Catalan university: the results of a survey” (2007) reports on an online survey conducted by Angel Borrego et. al. in Spain. This work focuses on who is using electronic resources for academic work among faculty at Catalan universities. The survey looked at both academics from the natural sciences as well the social sciences and humanities. Based on an e-mail survey, this work seeks to determine whether users preferred to consult electronic or printed journals and what might the reasons be for such preferences. Respondents were clearly asked if they would

use electronic titles over printed ones if the printed sources were no longer available. It was determined by the paper's authors that those respondents who were resistant to using electronic sources were more likely to not be aware of the existence of electronic equivalents or how to gain access to such electronic material. Thus, it was surmised that the resistance to using an alternative medium for reading and work was based on understanding and awareness of how electronic materials can be accessed rather than any philosophical opposition to using the medium. The authors also made a few interesting qualifications: first, humanities professors and researchers were more likely to use print text compared to their colleagues in the natural sciences; second, younger professors, irrespective of discipline, were more likely to use electronic formats; and third, males tended to prefer the use of electronic media more than their female counterparts.

“Scholarly E-reading Patterns in Australia, Finland, and the United States: A Cross Country Comparison” (2008), a study by Carol Tenopir et. al., approaches the reading patterns of academics from a cross-country perspective, trying to establish who is reading electronic articles, where they are reading them, and for what purpose. According to this study, there is great variation between reader habits in different countries but also some commonalities. When it comes to the reading of online articles, an academic's age seems to be a key factor to whether or not she/he uses online articles extensively or exclusively. Moreover, an academic's status seems to determine how much time she/he devotes to reading online, with full time professors tending to read more electronically-based reading materials as opposed to lecturers who do not, primarily because the latter do not have the luxury of free time for conducting research due to the fact that they spend more time in the classroom and in other unrelated activities. As well, reading patterns

seem to vary by discipline, with academics in the fields of engineering and medicine doing more e-reading compared to their counterparts in the humanities who do more print-based reading. The authors of this study clarify, however, that humanities professors spend considerable time “e-reading,” but their resources are much more likely to be print-based documents in comparison to those used by their colleagues in engineering and the sciences whose reading—but also primary and research documents—are mostly in electronic form.

In his thought provoking paper entitled “Digital reading spaces: How expert readers handle books, the Web and electronic paper,” Terje Hillesund (2010) explores the evolution of reading from the perspective of how readers think and experience the words on the “page.” Working from the assumption that reading is both a mental activity and a physical act, Hillesund—agreeing with the psychologists—makes the not so obvious point “that human intellectual faculties, rather than being the result of brain evolution alone, are reciprocally related to anatomical and behavioral adaptations to environmental and social changes” (2). Establishing a brilliant connection in the evolution of human language between bipedal walking and human hands becoming free so as to make possible gestural communication, Hillesund points to scientific research that argues for the use of symbols and spoken language as deriving from gesturing. The technology of reading, accordingly, has participated fully in the evolutionary cycles. For instance, long ago a reader had to use both hands while reading a long scrolled papyrus, an activity that was physically difficult and, moreover, required reading aloud in order to separate, in the act of reading, the words and sentences which by convention were written continuously and without breaks or punctuation. Eventually, the printing press (which represented a

massive jump forward imaginatively and technologically) ushered in “hands free” reading, introduced spaces between words, and allowed for the ability to read more quickly and do so silently and privately—in “one’s own head.” As Hillesund argues, there is a close connection between the way we physically engage the written word and how this experience affects how we read. Though only tangentially related to the topic of how professors (expert readers) engage with the printed and electronic media, Hillesund’s argument is brilliant and thought provoking.

“Not in Love, or Not in the Know? Graduate Student and Faculty Use (and Non-Use) of E-Books” (2012), is a study by Erin Cassidy, Michelle Martinexz and Lisa Shen that focuses on the use of electronic resources at the Sam Houston State University. In a survey of both faculty members and graduate students, the reasons for using electronic resources such as e-books and for not using them, for whatever reason, is explored. In terms of findings, 28% of respondents preferred the use of e-books while 31% preferred printed books. One response from a particular subject indicated that "tangibility" (328) of the printed book was a key factor in determining preference. Other respondents agreed that the search function to be used with entire texts was an important consideration for them as was the inclusion of embedded media such as videos and hyperlinks and the convenience of downloading and transporting text from one place to another. As suggested in the results, surprisingly, “faculty appeared to show more willingness to recommend e-books to their undergraduate (75%) than graduate (63%) students” (328).

In “Changes in Reading Behavior Among eReader Adopters” (2012), Lingya Zhang, seeks to identify changes in reading habits among faculty members at Rochester Institute of Technology (RIT). The author is interested to learn how the use of e-readers

may have changed faculty members' reading habits and how digital media has changed reading habits and understanding over time. Zhang's research begins with a survey RIT faculty are asked to complete. The survey includes statistical details specifically relating to such matters as gender, age, level of education, and income. From the responses to the survey, Zhang concludes that gender, age and education impact on who reads or does not in certain media. Interestingly (but not unexpectedly), life-long readers self-report that they are unwilling to give up reading printed text due to its visual appeal. One of Zhang's major findings, therefore, is that those who enjoy reading are still likely to use printed text regardless of whether or not eReaders such as Kindles and iPads are accessible to them.

“A Comparison of E-book and Print Book Discovery, Preferences, and Usage by Science and Engineering Faculty and Graduate Students at the University of Kansas” (2014) reports on an online survey conducted by Julie Waters et. al. The respondents were from the science and engineering faculties. One of the major questions asked was the following: “do you prefer e-books or print books?” Interestingly, 61% of respondents claimed to prefer the use of print while 39% preferred electronic formats. In an attempt to tease out reasons for the preference for one medium over another, this study established that approximately 70% of both faculty and graduate students agreed that one of the largest disadvantages to using e-books was having to read onscreen. As well, a majority of respondents, comprising of both faculty and graduate students, agreed that the advantage of e-reading is largely that it may be used anywhere and at anytime. Another important finding is respondents' ability to remember more clearly when using printed texts as opposed to electronic ones.

Finally, in “Reading behavior in the digital environment: Changes in reading behavior over the past ten years (1995-2005),” Ziming Liu, a researcher working at the school of Library and information Science, San Jose State University, examines the changing reading habits over a ten-year period of a group of 90 individuals comprised of engineers, scientists, accountants and teachers who, in Liu’s opinion, had extensive experience in reading digital documents. Based on a questionnaire that includes seventeen basic questions (all variations of the “percentage of time spend on reading” materials in different media and the “frequency of annotating” and “of printing” these materials), Liu conducts a quantitative study that examines how the reading habits of his research participants have changed as a result of the growing influence of technology.

Liu summarizes his findings in the following way:

With an increasing amount of time spent reading electronic documents, a screen-based reading behavior is emerging. The screen-based reading behavior is characterized by more time spent on browsing and scanning, keyword spotting, one-time reading, non-linear reading, and reading more selectively, while less time is spent on in-depth reading, and concentrated reading. (700)

Useful as Liu’s work and conclusions may be, I have not come across a qualitative study dealing with the way in which university professors view the impact of technology on their reading habits when moving from print to online reading. Therefore, I am confident that my project has not been attempted before, either as a quantitative or a qualitative study. As already suggested above (and this bears repeating), the research that has been done (and in great abundance and frequency) deals with how online reading media affect reading practices, especially such practices within the classroom or

involving learners in general (for instance, see Burge and Roberts; and Cassidy). While online learning and the use of the Internet and technology in the classroom attract a lot of attention (and, indeed such research is fundamentally important in allowing us to understand the way education is evolving and what future learning may look like), the basic question regarding the online and offline reading habits of university professors constitutes a gap in both the literature and, consequently, our understanding of the topic. Obviously, what is different about my research is that it poses a specific research question whose very contemplation and discussion may contribute significantly to our understanding of future reading approaches and practices, both within and outside the classroom.

## METHODOLOGY

### 1. Beginnings

In the previous section of this thesis, I have examined the opinions, findings, conjectures and views of a number of authors and researchers on the topic of the nature of the experience of reading online and “offline” (printed) texts. The literature suggests that, first, much additional investigation, research, and study are required before one can be conclusive about this topic; and second, that popular opinion, as well as much research, appears to be divided into two distinctive camps when it comes to the topic of the discourse of reading and technology and its effects on education and the shaping of readers’ minds—camps to which names such as “Net enthusiasts” and “Net skeptics” or “Luddites” and “Philistines” have been applied.

One camp clearly supports the notion that online technology is of the utmost importance and, therefore, onscreen reading is not just desirable but also necessary since it leads to superior learning outcomes; the other camp refuses to admit that online technology is anything more than a tool and argues that more traditional approaches in reading and education—such as the classical form of the book bound with paper and glue—are preferable and effective. There are those, as well, who choose to think that online and print reading have their advantages and disadvantages, and that it should be possible to discover how to read and learn using one or the other medium according to the occasion and the specific need.

The purpose of my work is not to debate or choose a “winning” side in this very heated debate (though emotionally I would like to do just that), but rather to open up a

space for a constructive discussion about the experiences of readers who use differing media for reading and studying the written word. Specifically, here I conduct a qualitative study of the ways we read amidst the omnipresent world of electronic devices and applications that may enhance the flow of information available to us but may also be the cause for reading that is devoid of sustained reflection. Consequently, I have not been concerned so much with designing a project with the view of judging whether one reading experience is superior to the other; instead, I have sought to address the specific question of how the nature of the reading experience is affected by the medium. Does the reader experience screened text in the same way as he or she does printed text? How is the nature of the reading experience affected by a particular medium? To what extent does the medium impact the reader's capacity for attentiveness or concentration and contemplation or reflection? Does the medium influence the way one reads and thinks? These are some of the critical questions that form the context of the topic I have been investigating.

As suggested earlier, the ideas and work of Marshall McLuhan, Walter Ong and those of Bolter and Grusin offer a structural viewpoint that coloured my perspective as I prepared for the variety of opinions and attitudes my research participants were likely to exhibit towards this topic. This, in turn, helped me in constructing my own ideas as I started to reflect upon my own research questions on the topics of technology and reading.

Familiarizing myself with the theories of McLuhan, Walter Ong, and Bolter and Grusin has proved to be informative but problematic as well. After all, qualitative research ideally involves a researcher who begins without presuppositions and proceeds

to *build* theory that is rooted in her observations, findings, and interpretations. Placing aside a perspective and a theoretical framework already formed from my reading has been challenging; however, I believe that my awareness of this challenge may have added complexity and even a dose of desirable ambiguity to my analysis and interpretation.

Keeping in mind the current dichotomy when it comes to opinions about “How the internet is changing the way we think, read and remember” (to use the subtitle of Carr’s book) but also the theories that fuel it, I was also prepared to bring into the discussion an open-mindedness about what my interviewees would likely say, an awareness of how my own biases may have influenced how I understood their responses and, consequently, how my interpretation of my findings may have been explicated and summarized.

My own research, then, has necessarily been informed by the work of academics and others who research and reflect upon the nature of the reading experience and the impact that technology has on reading today. As is the case with any researcher, my work has involved bias, something that must be disclosed and accepted while it’s understood not as a term of apology but rather as inviting dialogue and open-ended discussion and reflection. This bias is influenced by the works I have chosen to privilege in my discussion and shapes, surely, the nature of the argument undertaken here; this bias is also reflected in the approach to the topic, that is, the methodology employed therein.

## **2. The Qualitative Research Paradigm**

Given the option to conduct either quantitative or qualitative research, I chose the latter. However, I did not do so without thinking about the benefits of each or without realizing that both are capable of providing results that can be quite fruitful. In comparing briefly these two methodologies, my key aim is to describe what comprises qualitative research and why it is appropriate for my project. In other words, I am not interested (nor is it appropriate or even desirable to be interested) in arguing or worrying about whether one may be superior compared to the other as an investigative method.

Quantitative research is viewed as being objective and as involving “hard” science; it is designed to test a theory; its focus is precisely and vigilantly controlled; its findings are to be measurable and its methodology to be mechanistic and context-free; the researcher stands apart from the subjects and results, using research tools and instruments in seeking generalizations upon which explanatory principles may be based.

On the other hand, qualitative research (as I have already intimated) is subjective: it is designed with the view of developing an idea or a theory to be used in the understanding of a topic; its focus is intricate and expansive since it takes for granted that there is not one but many realities; its findings are subject to interpretation and its methodology open to modification and revision, dependent on context—and its questions not set in stone; the researcher is part of the process and her/his insights and biases are closely and productively interwoven with its process, while the results are designed to answer the research question using inductive reasoning and dialogue; and instead of research tools and instruments, qualitative research uses interaction, dialogue, and

discussion in seeking patterns of thought and behaviour as expressed by the subjects in order to arrive at unique insights about a certain topic.

Another way of saying all this is that in qualitative research the researcher is herself or himself the main instrument of data collection as well as the person through whom the important function of interpreting the collected materials is performed. It should be stated that the main reason behind my choice of a qualitative methodology is that the alternative, a quantitative methodology, would have proven impractical considering that it has no way of focusing on subjects' experiences and, thus, would have rendered my research question ineffective.

It is worth discussing here—albeit briefly by necessity—the way in which qualitative research deals with the issue of “soft” interpretation and quality. Of course, the use of the word “interpretation” in this context is itself worth interpreting in some detail. As Thomas A. Schwandt, Yvonna S. writes,

interpretation is an omnipresent feature of all human attempts to understand—in other words, there can be no appeal to some kind of evidence, experience, or meaning that is somehow outside of interpretation, independent of it, or more basic than it. To put it more directly, an interpretivist would say there is no such thing as the ‘interpretation’ of the value of some policy or program, on the other hand, with the latter being more basic than the interpretation or in some way independent of the interpretation. (“Judging Interpretations” 17)

All interpretation, then, is subject to one's own ideas, practices and beliefs. I would note that this is an important point when it comes to data collection and experience.

Lincoln and Guba address interpretation in qualitative research in terms of the nature of reality and our understanding of what is true and false, arguing convincingly that, in many instances, these are socially constructed concepts. They argue, then, that there is an axiom in qualitative research, according to which,

the nature of reality asserts that there is no single reality on which inquiry may converge, but rather there are multiple realities that are socially constructed, and that, when known more fully, tend to produce diverging inquiry. These multiple and constructed realities cannot be studied in pieces (as variables, for example), but only holistically, since the pieces are interrelated in such a way as to influence all other pieces. Moreover, the pieces are themselves sharply influenced by the nature of the immediate context.” (“But is it Rigorous? Trustworthiness and the Authenticity in Naturalistic Evaluation” 17)

Schwandt, concludes that all human behaviour (including that of the research subjects and the investigator) is “time- and context bound,” which, according to him, produces a boundedness; in turn, this boundedness “suggests that inquiry is incapable of producing nomothetic knowledge; instead, it produces only idiographic ‘working hypotheses’ that relate to a given and specific context” (17).

Interestingly, even within the ranks of qualitative researchers, there is considerable debate and discussion (and a long history) about the quality of their research. Often scholars are concerned with the concepts of validity and reliability (traditionally notions encountered in quantitative research), which leads to the desire for generating criteria used in judging quality in qualitative research. For instance, in their work on this topic, Lincoln and Guba come up with four concepts designed to establish

the trustworthiness of a research study: “truth value, applicability, consistency, and neutrality” (qtd. in Seale, et. al. 467); however, these criteria “depend on a contradictory philosophical position, because the belief in ‘multiple constructed realities,’ rather than a ‘single tangible reality’ which lies at the heart of the constructivist paradigm, is not consistent with the idea that criteria for judging the trustworthiness of an account are possible” (Seale et. al. 468).

Seale does not deny the usefulness of discussion concerned with the quality or truthfulness of qualitative research but notes, very usefully, that political commitment of the kind demonstrated by Lincoln and Guba in their 1985 article mentioned above is too monolithic and limited. It is for this reason that Seale considers two later (1989 and 1994) articles by these writers which include a fifth criterion, authenticity, and introduce, thus, a more pliable and useful approach to qualitative research:

Authenticity, [Lincoln and Guba] say, is demonstrated if researchers can show that they have represented a range of different realities (“fairness”). Research should also help members develop “more sophisticated” understandings of the phenomenon being studied (“ontological authenticity”), be shown to have helped members appreciate the viewpoints of people other than themselves (“educative authenticity”), to have stimulated some form of action (“catalytic authenticity”), and to have empowered members to act (“tactical authenticity”). Of course, the view that fairness, sophistication, mutual understanding, and empowerment are generally desirable is itself a value-laden, culture-bound position. (468-69)

Seale’s discussion of Lincoln and Guba’s theoretical musings about judging quality in qualitative research is presented here for two reasons: first, in order to suggest

the complexity and the self-interrogation that qualitative research is still undergoing—and from which it benefits, I would add; and second, in order to admit that my encounter with and subsequent understanding of qualitative research have likely become more complete and lucid in the process of conducting my own research project.

Indeed, the place and role of the “researcher” is as important as (and inseparable from) the context and the nature of the materials gathered. In quantitative research, the research’s potential is largely measured by the level of disinterest and objectivity that can be built into the research question, the carrying out of the “experiment” and even in the interpretation of the collected data; in qualitative research, the “researcher” continues throughout to be involved in the process and interpretation, to the point that two researchers investigating the same question or topic using the same methodology and even the same research participants may arrive at quite different results. It may be thought that the second method will produce good results the closer the research comes to being objective and scientific, overriding the researcher’s preconceived notions, biases, and personal proclivities; on the other hand, I would argue that this is not necessarily the case since the aim of such research should not be the achievement of some sort of abstract reliability but, rather, the understanding of a topic or situation—understanding that must be subtle, complex and non-prescriptive.

This being said, my research contributes significantly to the overall understanding of how we read and think and how the media in which we do our reading affect both our reading and ourselves. Unlike quantitative studies that consider data that support the notion that our brain functions and/or intelligence (our ontology) change when different reading media are used, the type of qualitative work I have done has much to offer since

it can provide insights not necessarily available to quantitative research. If looking at brain function can determine that shifting from print to onscreen reading brings about a re-wiring of the brain, my approach offers a window into readers' understanding as they describe in their own words and from their own individual perspective the experience of print and onscreen reading and what they themselves think about that experience.

### **3. Research Design**

My research looks at a small set of readers (eight participants) representing a specific class of readership (UNB professors) and the way they construe the act of reading. More specifically, my research explores what my participants think about the experience of reading on paper as opposed to that of reading onscreen.

One of the main reasons for the decision to have such a small sample is, certainly, the limited period of time and resources available to me in the face of such a profound and enduring question as that of the significance of the medium of reading on the quality and nature of reading itself. For my research, I chose both professors in their late forties and fifties but also ones in their thirties: my rationale for this was that the first group was likely to have started reading long before the age of tablets and even computers while the second group started reading—at least as part of their university education and professional activities—as the shift from paper to onscreen reading was taking place. Online sources and onscreen reading comprise by now a significant part in the delivery of an increasing number of courses. My thinking, thus, was that these individuals would

address the place of the two kinds of reading investigated here in both their own reading and in their teaching.

This project was constructed around a series of semi-structured interviews with eight UNB professors. I recruited potential interviewees among UNB faculty by sending out an open request for participants via the university's faculty lists/e-daily. The only criterion I used was that each participant was to have taught long enough so that, at an early stage of her or his education, she or he would have had done considerable reading using print. The reason for this criterion was that I wanted each participant to be able to reflect on the differences of the two experiences, even if she or he may now be reading mostly onscreen.

Eight people responded in total to the research questions. The age range of the group is from late 30's to late 50's. Each individual has taught at the university level for at least ten years.

Each of the eight research participants was interviewed for approximately fifty minutes in her or his office, although the length of the interview depended largely on the individual research subject's willingness to spend more or less time responding to my questions. Conducting interviews in the individual's office was done for the sake of convenience but also because this was the place where the interviewee was likely to feel at home. This is not so that I could gather any observations about the individual participant's "behaviour" (which is often part of a qualitative study) but only because I wanted the professor to be at ease and the interview to be as much part of her/his working and reading routine as possible.

Prior to the interview, I sent each interviewee a one-page information letter in which I outlined my research question and methodology. The semi-structured interviews began with one of the questions appearing in the next section of this thesis. Though I wanted to ask at least four of the same main questions of each interviewee in order to carve as much common ground as possible in terms of responses, I also made sure that each conversation followed its own contours so that it reflected the interviewee's personal and professional experience of reading. I conducted my interviews in person and, with the participants' permission, each interview was recorded and, later, transcribed and analyzed.

Beginning with a few standard questions, each interview was allowed to take its own shape and develop in response to what each participant wished to emphasize or, in some cases, to avoid discussing. In other words, I was interested in not only standard responses or ones that supported my own opinions and even biases. Moreover, my interviewing style reflected the fact that the relations between the interviewer and the study participants powerfully shaped these responses. Consequently, the flexibility of my questions made for a collaborative—rather than a question and answer—interviewing model whereby my questions and possibly brief comments evolved from, rather than being dictated by, the situation and conversation or discourse. More than anything, I wanted to acknowledge and interrogate the power relations between researcher and participants both during the time each interview takes place and in the analysis and writing up of the results.

In arriving at a list of basic questions to use during the interviews, I came up with thirty-one in all. Though I have preserved this long list in an Appendix II, what follows

here are the questions (seven in all) with which I began.<sup>2</sup> In the appendix, those questions I particularly wanted to ask have been “bolded,” including the first one with which I began:

1. *What is your preferred reading medium: print or electronic?*
2. *When reading academic texts (for the purposes of research or teaching) that require a certain level of concentration and or attention, what medium do you find yourself using?*
3. *Do you read for long stretches of time? Are you likely to read for longer stretches of time with printed text or computer monitors or tablet devices? Why?*

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<sup>2</sup> To be more precise, I began each interview with the first question, a kind of probe that opened up the requisite space for a few of the other questions I list here. Even more productive was the possibility that this first question would elicit the kind of response to which--listening attentively and reacting myself—I could use in order to follow a line of conversation that allowed me (and the interviewee) to be liberated from the rest of the questions in this list.

As already mentioned, the appendix preserves all thirty-one questions, with the “basic” questions I wanted to pose to each research participant appearing in bold. I would argue that the entire list of questions is necessary and was helpful in preparing me for these conversations since it provided a context within which I could later evaluate and analyze the responses.

4. *Have you noticed a shift in terms of the amount of reading you do in your own life from the printed text in favour of screen-based reading? If you are aware of such a shift, could you discuss when it may have started?*
5. *If you do use the potent searching and filtering tools facilitating web-based reading and research, how has this changed the way you absorb information and has it changed the kind of reader you have become—in other words, are you a less patient reader, a quicker reader, a more informed reader?*
6. *What do you think of the various alerts (mobile phone, Facebook or Twitter alert blinks on onscreen, e-mail alert) available today? Do you have any insights about the place of alerts in today's onscreen reading?*
7. *If you think of the reflection that happens during and after reading, is there a difference in the quality and duration of that reflection when you are reading printed texts as opposed to screen-based texts? In other words, do you reflect more while using one medium as opposed to the other?*

Obviously, all of the thirty-one questions could not be posed during a single interview conducted over a fifty-minute period during a single sitting. The questions appearing in the Appendix were formulated, then, with the view of beginning with two or three standard ones—from the group of seven appearing above—while keeping in mind that individual answers would vary (and this would be welcome), perhaps quite radically and in accordance with the research participant's specific reading history, professional discipline, age, and philosophy of education; after all, all of those who were interviewed were educators with long histories as readers and teachers, which means that they had

quite specific (if different) ideas about the value of different reading formats and about their own interactions with them.

I brought into each interview all of the questions appearing in the Appendix and also “carried them in my head.” The questions were organized so that, depending on the interviewee’s answer, a question out of sequence could be used next in order to explore a specific point or to ask a new question arising naturally from a point just made. In fact, the questions appearing in the Appendix were organized in clusters so that a specific response could initiate a two- or three-question sequence.

My questions were also designed to be as open-ended as possible so that they could invite responses that were neither programmatic nor easily deduced by me. I wanted to encourage answers that addressed the participant’s own frame of reference and gave her/him the opportunity to provide her/his own context and specific examples and details. In other words, the questions were meant to allow the interviewee to feel as though she/he need not worry about the kinds of answers for which I was necessarily looking. For this reason, I tried very hard not to ask questions that implied a particular answer. Though bias is always something that the formulation of any interview question is likely to betray, I left the questions as open ended as possible and encouraged interviewees to both answer my questions but also to reflect on their usefulness and relevance.

One additional consideration in designing these questions was the possibility that I could be persuaded by unexpected turns in one or more interviews to ask a question that does not appear above but needed to be asked as a result of a comment or an argument made during this process. To repeat an important point here, the semi-structured nature of qualitative interviews such as this one allows and indeed encourages answers and

arguments that may not have been envisioned by the interviewer but which may manifest themselves and appear unexpectedly and without prompting during the process of the discussion. In designing the questions, I hoped that I would learn much about the research participants' reading preferences, ideas, and habits through the manifestation of such "sudden insights"—as many of them as possible.

## RESULTS

In this chapter I will outline in detail the themes and topics that emerged from the interviews I conducted with my participants. The following paragraphs, then, offer a series of points supported by concrete examples from the transcripts and followed by discussion, analysis, and reflection on the experiences of academics as readers.

As stated in the Methodology chapter, the following question was asked of all my participants at the beginning of the interviews: What is your preferred reading medium given the choice of print and electronic text respectively? For each interviewee I clarified that, for the purposes of our discussion and of my thesis more generally, print text is considered anything from books and journals to magazines or simply anything printed on, and accessed from, a physical page; a digital text, on the other hand, is anything accessed in the form of tablet reading, Kobo and Kindle reading platforms, or by viewing the screen of one's desktop, laptop, or even phone device.

Their answers to this question showed a clear preference for the printed word and the medium of the book, journal, printout (that is, material available in electronic form but printed and read in paper form), or even photocopy. It would appear that this is where the majority of the respondents tended to situate themselves as readers.

This being said, as each interview moved forward, it would become evident that the actual preference in each case was much more complicated than just a "Yes, I prefer print over the digital medium" or even "I prefer digital over print." Regardless of specific preference, all the professors interviewed still spent a lot of their time reading onscreen and, thus, the majority of them had a lot to say when it came to digital, onscreen reading. The most common reasons for gravitating towards the print-based medium

seemed to have to do with the physicality of the text—its haptic or tactile quality—and the traditional associations with reading a dearly loved book, perhaps in a setting other than the academy. For all of my interviewees, then, there seemed to be a warmth and familiarity (and associations) that the experience of reading a book in print afforded them. In turn, the interviewees did not think that this kind of experience was available to them in reading in a digital medium. For instance, Kar makes a fine point when he says this: “Yah, there are a lot of triggers to them, and the other thing that I find with books too . . . you know I can pick up a book and frequently remember the situation in which I read the book. And sometimes remembering the situations are more important than the content.” Kar, then, thinks that with book or print reading, it is possible that what is more important is not the content but, rather, the personal and emotional experience of the reader who later can remember more vividly than any narrative or argument the situation and context in which the reading occurred. The printed medium, thus, offers a more lasting and resonating feeling and connection than does onscreen reading.

Having made what is perhaps a romantic claim for the precedence (and preference) of reading in print formats, these same individual interviewees would readily admit to reading, on a regular basis, large amounts of text onscreen, regardless if this was a desktop, laptop or tablet device—and in many cases using all of these for different reasons.

One key theme, then, is the physicality or rather the nature of the text, whether paper or electronic. There appeared to be something about the physicality of a book in print form that the interviewees considered familiar and comfortable (comforting?), and felt physical, emotional and intellectual contentment in working with it because they

found it easy to maneuver and navigate, resulting in a positive (and satisfying) user experience. One of the most interesting responses was one from Theo, who speaks about his preferences when finding a PDF or article online that he decides he had to read:

I will probably save the PDF on my computer, but I will actually print off the whole PDF or article you know and I will in a paper format [that] allows me to do this, to sit back and relax, opposed to being stopped from a distance on the screen; and, so, the more important it is I have to engage, interact, you know, the more I am likely to print.

For this individual, the more important and intellectually demanding the text is, the more intense his need is for a printed version to be used for reading. Though the necessity of having the printed information readily available and held in one's hand is of primary importance, it's also of consequence to Theo to be able to pick it up, to sit back and move around while holding it in order to find a convenient, comfortable, and relaxing position to read it in. This level of comfort is, according to him and others, impossible to achieve while sitting on an office chair and working on the computer where this article was first accessed.

Of course, one may claim that what Theo wishes to do with the printout can also be done with an electronic text since tablets and e-readers allow for this physical manipulation and desired comfortable, physical position. However, as Sam states in addressing the issues of relaxing and the ease of moving around while using a tablet (in his case an iPad),

Simply the flexibility [of] bending back the cover, holding it at an angle, one of the things with my iPad, an e-reader might be different; but if I am laying in bed

reading and if I turn the screen sideways, the whole thing flips around; so, if I'm lying in bed or I am at the beach doing something that is less formal, it is always in print.

There would seem to be, then, an advantage to the hardcopy book that one might not be able to enjoy while using a computer, a tablet, or a laptop—and this is the ability to move around with ease in any environment, and to read in a comfortable position, while not losing one's page or spot. Theo's description of his onscreen computer reading perhaps summarizes best how he and others feel about the two reading options: He describes himself as “being stopped from a distance on the screen,” imagining himself as being prevented from accomplishing the act of reading by an electronic medium that is an obstacle, which is a metaphorical and powerful way of suggesting that the medium poses a physical impediment, a blockage between himself and the text. This barrier or hurdle is all the more powerful because Theo speaks of distance, as though there is a physical space separating him from the object (the text) to which he wishes to get closer and engage with, and he is frustrated by the fact that onscreen reading—and the computer screen specifically—makes it impossible for him (or even forcefully prevents him from) getting closer to the text not only physically but also, in turn, intellectually.

Several of the interviewees also described experiences in which they found reading onscreen for long periods of time to have a detrimental effect on them. For instance, Ben mentioned his recent experience in dealing with a huge e-mail backlog: “[E]arlier this year [2014] I had 200 letters of intent to read, which was a long process and I did them all on the screen. My wrist was getting sore from fooling around with the mouse and getting eyestrain.” For this individual, the process of viewing and working

onscreen on a large volume of letters of intent became more complicated and physically taxing given the added pressure and the nature of the repetitive movements of his wrist in manipulating his computer mouse (a tool whose use is necessary when engaging with this specific digital medium) and in having to stare for long periods of time without a break at a brightly lit screen, which caused him to complain about eye strain and fatigue.

Interviewee Theo corroborates Ben's experiences with the effects of onscreen reading when he mentions that he finds "electronic reading more tiring." Most of the interviewees, then, made the claim that reading onscreen for long periods of time causes eye strain, as well as physical and mental exhaustion. Sue, another interviewee, was categorical in stating that experiencing eye strain when it comes to reading on the screen can be frustrating, physically painful, and mentally exhausting; but, she continued, it's a practice she pursues while, at the same time, being aware of its debilitating effects:

I am always reading on my phone. I use Kobo mostly, but I read on my phone mostly when I wake up in the night. I read on my phone, in my office on my phone I read, and it's a small screen and now I am suffering from some of the consequences of that but nonetheless I still do it.

Sue is cognizant of the fact that reading onscreen—and especially such a small one as that of a cell phone, is having several adverse effects on her. Even though the most obvious adverse consequence of this is trouble with her eyes, there are many others, including her inability to sleep throughout the night since she seems to need to check her "small screen...when [she wakes] up in the night." One wonders whether she wakes up because she can't sleep for some other reason or if she wakes up because of a subconsciously felt need to check her phone. Aware of the consequences of her voluntary

or involuntary compulsion to read on the screen at all times of day and night, she nonetheless continues this practice, which can no longer be explained in terms of the convenience and accessibility of the medium. Indeed, Sue was the only interviewee to confirm that she actually uses her smart phone for reading not only messages and e-mails but also books and short journal articles. She qualifies (or perhaps justifies) her use of her smart phone as a device that allows her to gain quick information for work purposes (but also at times that she enjoys using to read longer pieces of writing) and, thus, that allows her to work at all times of the day, irrespective of whether she is in her office, or waiting in the doctor's office, or travelling the world.

In other words, an important factor that academics consider and which contributes to the formation of their reading habits and experiences has to do with the reading medium's convenience and transportability. My observations upon entering the interviewees' offices (where I conducted all of the interviews with the view of getting a sense of what their work spaces were like) suggest that each one of them, without exception, used an iPad or another tablet device. Overwhelmingly, the evidence I was able to gather pointed to the constant presence of a digital medium that made it possible—given its convenience of use and portability—for the interviewees to perform regular work, read, and access information while away from their primary work place (such as a university or home office). The significance of the digital medium, then, is that it offers these professors the ability to work no matter where they are, including during travel to conferences or for research purposes and even during a vacation or a family trip. One could surmise from the interview transcripts that portable devices make reading material so easily accessible while away from one's working space that the nature of that

space must be re-thought since, in actual fact, an office chair, an airport chair, an airplane chair, and a beach chair have become interchangeable for these individuals. For example, as Rick explained to me,

part of it is just the logistics, . . . It's nice to have things electronically, you don't have to carry around paper and often I think about it in terms of flying. I find that I don't like the laptop on the [air]plane because of the space unless I get bumped up to first class. So, what I would do is print articles and write comments on them and then write my reviews after. So I would [have] thought if I just put them on my iPad, I can do my comments there and do my reviews afterwards, along with other things I read, like people's dissertations and things like that.

Rick's iPad makes it much easier for him to continue working while travelling because that way he is able to store and carry all the materials he needs, from articles to dissertations, in a form that's compact and easily accessible. The image of the weary, absent-minded scholar weighted down by hundreds of pages of paper and dozens of books thus gives way to one who no longer has to sacrifice comfort in favour of continuing his work while he is away from his desk. It is also of interest, however, that Rick makes a distinction between reading on a portable digital device and making notes on various things, on the one hand, and using such notes later when he begins to compose what he calls his "reviews" since, presumably, writing reviews (either of student work or work by other scholars) necessitates a different environment and, perhaps, different reading and writing media.

Indeed, the academics I interviewed were unanimous on the topic of the advantage and ease of using a tablet while travelling. This was one of the few instances

where most of the interviewees agreed on the usefulness of the digital medium, especially the usefulness of the reading tablet. At the same time, a few of my interviewees also recognized that convenience is sometimes undermined by certain conditions that need to exist for the tablet to work well and for a long period of time. For instance, Lucy begins by praising the convenience of an iPad not over paper but, understandably, a laptop:

I will take my iPad for multiple reasons and I will take that iPad rather than the laptop because I can do the ever annoying thing of having to stay in touch with people all the time, also it does mean that I can have multiple papers on it and as I can't print it, but I can have it there and read it so for that it is certainly convenient.

Here Lucy is in agreement with the idea that the iPad or tablet is a convenient tool for accessing text or evaluating students' papers while travelling; but Lucy also goes on to make the following observation in which she challenges the notion that the tablet is always superior to paper:

. . . but you don't need to recharge the paper [laughter]. There are times when you are easier when you are travelling when you can't get power and recharge; but there are times when having those two papers and not having to worry about battery life and not having to carry the damn extension. It is kind of nice. As well, in general, the unplugging is good for the head.

Like her colleagues, Lucy agrees that onscreen reading using a tablet is convenient and appealing, especially when she is travelling or finds herself away from her principal office location; however, Lucy hesitates and refers to the supposed superiority of print, which has the advantage of not requiring an electrical source and the inconvenience of

plugs and cords, and carrying that “damn extension.” Of course, Lucy drives this discussion in quite a different direction when she adds that “in general, the unplugging is good for the head.” It’s not clear whether that “unplugging” is good because it offers the reader some well-deserved respite from the unremitting work that connectivity ensures or because a break from reading—on any medium—offers the individual a chance to reflect—without being interrupted—upon the ideas made available to them through their reading.

The computer’s distractive tendencies was one point that came up repeatedly in the interviews. The preference for a digital platform in the form of the tablet being incontrovertible, then, the academics I interviewed were not blind to what they considered the various disadvantages of onscreen reading. Many of them suggested that one downside of using the computer or tablet for reading is that, at times, they found themselves to be bombarded by the medium’s distractive nature. As already mentioned above, Lucy explained to me that with the iPad she was forced to “do the ever annoying thing of having to stay in touch with people all the time.” Articulated in the form of a backhanded compliment to the medium, Lucy’s point is that the iPad offers her the opportunity to stay in contact with people she works with and those who belong to her personal life; at the same time, there is a level of discomfort or apprehension since the use of the tablet obligates her or even forces her to be in constant contact with everyone and, in turn, to be expected to respond to everyone—to the point that her comfort level is reclaimed only when she becomes free of the obligations and distractions of the tablet: “it is kind of nice. As well, in general, the unplugging is good for the head.”

Several of the interviewees also expressed similar concerns with regards to reading onscreen as those expressed by Lucy. In fact, almost all of them identified a level of distraction and anxiety that occurred when working on their laptops or desktops. The cause of such distraction was identified as the constant bombardment of email notifications that go along with working on the screen. Many of them stated that they have to make a conscious effort to turn off certain applications when reading and writing on screen in an effort to cancel out the distractions generated, especially those produced by the social aspects of the digital medium. Interestingly, many of these academics also admitted to not being able to let a notification go unanswered or at least unread, almost as though there was a physical gratification in reading a new message. For instance, in response to a question about his level of distraction while reading on the screen, Sam had this to say:

I am a slave to email notifications. If it is not the sound, if it just pops up, I will look on my computer screen and look at the bottom so I have taken to closing the email program because it is a distraction. When thinking is difficult, I will use avoidance. I will open up a news page or something like that so there is a lot more distraction online. And I don't get that kind of thing when I am reading a book.

There are several important points made by Sam in this response. Sam is cognizant of the fact that the digital medium has embedded in it certain distractions that are so tempting that he finds himself helpless in his desire to experience them. At the same time, the computer and its various applications offer Sam a certain kind of escapism so that, when the intellectual challenges of his work become "difficult," he uses the computer screen in

order to avoid dealing with the challenging situation or topic. And even though he knows that when serious work or thinking is at hand print might be preferable because “I don’t get that kind of thing [online distraction] when I am reading a book,” Sam nonetheless falls victim to the “siren song” of the digital medium, compromising his intellectual and emotional wellbeing and balance. Sam’s understanding of print reading may have something to do with his decision, now and then, to turn off applications such as email notifications: nonetheless, it appears that this decision does not diminish Sam’s appetite for reading the next e-mail, resulting in reduced levels of concentration.

According to my participants, in terms of accessibility and connectivity, tablets offer readers very similar opportunities as a desktop computer does. Continuing, then, with the issue of distraction (which applies to both desktops and tablets), one of the interviewees, Kar, made the following interesting comment which I cite at length here:

The ability to access stuff with a click can certainly be distracting. Um, you know because . . . you know I would often sit and read the entire article and then say oh yah, I want to go find this Johnson 1947 whereas not a lot of the PDFs have the hyperlinks to the electronic documents. So, when you are reading along and Johnson 1947 click it right there you get that new article up and you get something new and you didn’t finish the original one. And so the access is wonderful and very useful but it is very distracting . . . and I really hate the journal recommendations. You know, if I am reading something and I want to download it and it pops up and gives me recommended articles, you know, I don’t want to look at the recommended articles, I want to download and move on, so I find things like that really distracting.

It seems, then, that “more is not always better.” Kar understands and appreciates the wonderful capability of journal search engines and bibliographical applications that make available to him—and instantly—a lot of digitally formatted materials. However, Kar also understands the value of discovering, reading and reflecting on a single article, from beginning to end. Though this is possible when one is dealing with a printed copy of such an article, when the same article is encountered online and the reading activity is attempted onscreen, a kind of pandemonium of distraction may occur: hyperlinks may take the reader elsewhere, to a different article, to a different train of argument, to even a different topic altogether. No matter how functional and helpful instant access might be, it can also be maddeningly and exceedingly distracting. Beginning with the intention of downloading a single article that has been carefully selected and one that he wishes to read in its entirety, Kar is forced to entertain the option of also downloading other articles, which the search engine is programmed to call to his attention. But Kar does not wish to consider these recommended articles—at least not before he has read the current article of interest. He finds such “recommendations” to be highly distracting and exasperating. So, he objects and is frustrated by the fact that by reading online he risks being taken away from his original task and, likely, wasting a lot of valuable time.

Kar’s frustration with pop ups introduces one of the main themes that emerged from my interviews: the accessing of reading matter, regardless of whether the reading of these materials is done in print format or online and onscreen. Not surprisingly, there are two main methods the academics I interviewed use to access scholarly texts: they access materials through one of the university libraries where they can use mostly print based materials or they access books and journals through electronic library databases from

suppliers such as EBSCO and JSTOR. The majority of these professors are accessing materials through online databases such as the ones mentioned above. As Sue puts it, most of the searching I do is through electronic databases and then a lot of the articles will say “click here” to download PDF. [What] I do is save the article in a file or folder and then I label the folder, whatever the topic is that I am researching, and I go into the folder, I make notes on the article and if it is a PDF I can use Adobe and I can make comments, right, so from that perspective the reason I am reading articles like that is because that’s the way I am finding them. So, like several of her colleagues, Sue searches for the articles she wishes to read using one of the resources available through the UNB Libraries website and begins her evaluation of them while she is searching. Immediate onscreen access is followed by immediate onscreen reading and decision-making. Sue also has devised a sensible and efficient method of organizing her research activity of searching for and selecting articles for her reading: she creates a folder on her computer desktop, labels it appropriately, and then collects in that folder her chosen articles. Perhaps more importantly for this discussion, Sue also reads the articles in the form she finds them—for instance, she uses Adobe to format a PDF file and then uses that medium not only for reading but also for registering her reactions on the reading. She also adds her comments right on the digital space of the article in question. In other words, the digital format of the original article determines the environment of Sue’s subsequent reading activities and influences the outcomes of such reading.

Sue, then, values online searching and reading because it allows her to locate her materials quickly, keep them organized in folders and files that can be stored on her

computer desktop (and are presumably easily transportable in tablets or even electronic sticks). Sue also values greatly the fact that she can write notes and comments directly on the digital articles and, thus, maintain a personal record of her reactions, thoughts and ideas right where she keeps the articles on her computer.

In my interview with Lucy, I asked her the same question: does she gain her access to journals and various resources mainly electrically. Her reply suggested quite a different approach than the one followed by Sue:

Yup, that's where I get access to them. And I will do a first reading or, you know, [read the title], read the abstract, read the intro[duction], figure out, okay, is this something that I really need to wrap my head around? And then I will probably need to print out so I can sit with it and stare at it, you know. Having it on paper also means fewer distractions than if I'm reading on the computer where there's stuff like email pops up, a lot. If I want to read a paper online, generally I will put it on my iPad so that I am reading it on the screen and I can annotate on that, but not usually as well as I can by hand.

Lucy's response is quite interesting in a number of different ways. First, she finds her materials online but prints them in order to read the hard copy and be able to "wrap her head around" the contents. Second, reading the hard copy is preferred to reading on the screen because it eliminates distractions and, therefore, enhances concentration. And third, if she wishes to read the digital copy, she puts a copy on her iPad since that allows her to add annotations—though annotating online she finds to be problematic or less than satisfactory since she clearly prefers to make her annotations by hand and on paper. Lucy started teaching and doing research at a time when students and scholars did not have the

option of doing all the work online and reading and revising and annotating on the screen, something that has apparently left a hankering after pencil and paper as the tools to be used for these key elements of reading—that is, careful reading that involves both the eyes and the tactile sense. According to Lucy, then, the classical act of reading on paper and making notes involves all of the senses in that one looks at the text (vision), manipulates it and moves it around (kinesthetic sense), touches it (touch), smells its ink and paper as well as the scent of the pencil while writing on the paper (smell), and hears the sound of the paper as pages are turned or touched (sound). It's no wonder that for Lucy, a print culture makes her more comfortable and allows her to feel a more complete connection with the text.

Ways of accessing information and preferences for a reading medium need to be taken into account in any consideration of my topic and were front and centre as central themes in my interviews with the eight academics. Of course, I expected this to be the case. On the other hand, something that emerged from these discussions and for which I was not prepared was the notion of serendipity, which came up in a number of interviews. The way in which we access information has changed drastically in crossing over from a print to a digital environment to the point that some readers would claim that the formats of online access might be taking away from our opportunities to experience serendipitous moments which may contribute to achieving a fresh insight, idea, or understanding. Rick puts the matter in this way:

I used to go to the library myself. I would be looking at this, and I would see things, and I look at those two . . . things would just happen by chance and we learn from making connections through serendipitous moments, and they are not

random completely because they are things in the same section just like a hyperlink, so um . . . there is value in having distractions, the value of serendipity. Though it seems to me that Rick confuses the serendipity of visiting the library and searching through the stacks of books and volumes of articles with the serendipity of the hypertext considered as online distraction, I would insist on his recognition of the benefits of visiting actual as opposed to virtual libraries and discovering paths for one's research and argument by chance and depending on the way the books have been arranged in the stacks. Serendipitous encounters with materials are also dependent on the individual library's holdings. After all, not every library possesses every book on a given subject, and the presence and absence of specific books may contribute to the chance discoveries and misses.

Commenting on the meaning and rhetorical bent of Rick's phrasing—"I used to go to the library myself"—is likely to take us too far afield; but I can't resist noting the use of the past tense, which makes Rick's sentence read as a death penalty for the printed book. Be that as it may, Rick describes his old habit of visiting libraries, finding a book on the topic he was researching, and then finding other materials nearby that related to his topic but not necessarily in obvious ways, as an act of serendipity and one, moreover, that is quite different from the act (and results) of searching online on a electronic database. Rick also equates the action of serendipity with a positive form of distraction. Earlier in the interview, he had spoken about how digital media can have qualities and attributes that distract us from reading deeply and thoughtfully; however, in this quotation, he points out that there are forms of offline distraction that actually help the reader to make meaningful connections. Allowing for the wonderful distraction of neighboring books in

the stacks of a library makes possible chance discoveries and more insightful and informed decisions on what we end up reading and what might also be useful to look into besides the one book one goes to the library to find. Though it might not be clear in Rick's response, the most valuable insight I have gained as a result of what Rick does say and the way he says it, is the following: An online search is thorough and exhaustive, offering us all of the books or articles written on a certain topic; on the other hand, using the library and looking at and holding in one's hands the real books of a library turns out to be a "hit and miss" business with unexpected and often miraculous consequences. It is worth pointing out that, serendipity online is a qualitatively different and less fruitful experience from serendipity in libraries, it may have much to do with the fact that books in libraries are individually selected by librarians and professors, while online links are often selected automatically by a computer algorithm.

The discoveries that result from an engagement with the company that books keep in a library is something that Rick addresses but also confuses with what he considers to be similar interactions suggested by hypertexts and the like. On the other hand, Sam is succinct and clear in his comment on the serendipity offered by searching for a book in the library:

I picked up a book from the library some time ago, and I am working on a book with a colleague about history teaching and the arts, right, so she referred me to a book on Canadian history so I went down to the Harriet Irving Library to find it. Well, I find a whole shelf of books on the general theme on the connection of history and the arts so; but if it could have been available in an e-book, I would

have not seen the ones that are catalogued around it, right? So I think that changes the way we interact with reading.

While this sort of chance discovery is not likely to happen when one uses digital databases to locate books and articles on a specific topic, it does, indeed, happen in a library, according to Sam, and becomes a marvelous pathway to making connections and finding materials. These are chance encounters during which one stumbles upon unexpected “finds” while searching through a stack of books at the library. Viewed as positive distractions and fruitful diversions, they produce moments of empowerment and insightfulness that may not be available to the reader of e-books or the reader who never steps into a library other than to meet someone or to get a cup of coffee.

Lucy repeated Sam’s point about the empowering experience of coming upon something useful by describing her experiences as a graduate student: Every Friday afternoon she would go to the observatory library of her university and would spend a period of time leafing through recent periodical publications in her field:

Friday afternoons you would go hang out at the observatory library and pick up the recent journals and read through to skim the titles and abstracts and just look at what was there and what would pop up and, so, there is more serendipitous findings. Whereas now you search for a specific thing you want, so you go and get things you already know you want and so there is less of this accidental finds.

Here Lucy provides considerable depth to the notion of serendipity by pointing out that in using a search engine and databases you discover what you already know must be there; on the other hand, when one visits the library and searches through hard copies of its resources, one’s research may take unexpected turns since she or he encounters material

and approaches she or he may not have even considered before. Though it is dangerous to make the argument in favour of serendipitous research over methodical research using databases, one can nonetheless conclude that the experience of searching and reading online and onscreen is quite different from that of print reading.

Since reading preferences was what I wanted the interviewees to discuss, it was satisfying to learn of their palpable engagement with the meaning of memory while reading in the medium of print and in the medium of electronic text respectively. How do the two media affect memory? How do readers remember their readings and is the memory impacted similarly or differently by these radically different media? Responses strongly suggested that the medium used for reading was closely involved (intertwined?) in the subsequent act of memory since, clearly, individual readers remembered the information contained in a text based on the different ways—depending on the medium—they experienced it. A common theme that emerged in the interviews, then, was the ease of remembering things encountered on the printed page compared to remembering things encountered on the screen.

Interestingly and memorably, Fran described the difference in memory function between print and digital as a “kind of drop off”:

in terms of memory, there is kind of a drop off when you get to a screen, and I don't know if it's the tiredness of your eyes or the focus or the fact that there is a different size of screen. I believe a lot of it is related to writing it down physically when your body is sending something to the brain that says remember this.

Fran, almost imperceptibly and perhaps unintentionally, fuses (or perhaps confuses) the act of reading with that of writing and argues that the action of writing while reading on

the page is very important in ensuring that the reader remembers key facts, themes, details, and images. It does so because the physicality of the page and of the action of reading and writing are somehow involved in making an impression on the brain that is fundamentally different and much more potent compared to that made when the reading is onscreen. She goes even further, of course, by pointing out that, in her opinion, “there is kind of a drop off when you get [from print] to a screen.” In Fran’s experience, then, reading onscreen is limiting in the sense that recalling what she read is more difficult in that case compared with reading on the page whereby, as already suggested, she follows a practice that involves both reading and writing simultaneously. One way of understanding Fran’s explanation is to imagine that responding to reading on the page involves immediate rejoinders (and reflection) to the reading, which are registered on the page as writing. Unlike reading on the screen, reading on the page involves a habit of responding to, and engaging with, the reading material in an immediate, physical, specific way. No doubt, there is an intricate link or series of associations involved in the memory of particular things about a printed text that includes the way visual impressions are connected with physical clues.

Rick agrees with Fran about the different ways in which memory works and retains information depending on the medium, though his response is also quiet different, especially because his emphasis is not just on the nature of memory following the reading but while reading:

I remember something when I am reading something or I am thinking back to something that was earlier I know where . . . where it is; but when I am reading electronically, I do not because it is more of a flow, and I am aware of the

difference, and I mean I can mark things easily with the different tools, but I have a different sense of structure with reading and writing electronically.

Rick is quite emphatic and clear about the existence of a distinction: electronic or onscreen reading involves a different sense of “flow,” a different way of making associations between and to different parts of the text; and even though there are plenty of useful tools, according to Rick, that can be used with ease in order to comment on or mark up various parts of the text (and which would aid memory), it is much easier to remember and make connections when reading on paper.

A bit later, Rick goes on to note that “I think of a piece differently than if I read linearly, when it’s all laid out, because that affects how I structure it in my mind, in my memory, I think.” Rick, then, construes reading on the page as a linear process in which the structure of material on the page matches up with the structure and operation of his mind. In turn, this correspondence between the structures of the page and the mind coalesce so as to manifest themselves in acts of memory so precise that he can actually remember the exact page and place on that paper where an image or an idea appeared. Alternatively, Rick finds that he has a harder time remembering certain things when his reading takes place onscreen, something he supposes to have to do with what he calls the flow and formatting of the electronic page.

While agreeing with Fran and Rick on the fact that, depending on the medium, there is a definite difference when it comes to memory, Sam adds what appears to be a credible rationale:

I remember a book I have, a picture in my head where the section is or what the page it’s on, if it’s on the right or left, is it on the top third or bottom third.

Generally, I have a memory of that. Online I think I don't remember because I can just type a word in on the search engine and find it.

Like Fran and Rick and most of the other interviewees, Sam's visual imagination and memory operate in such a way that he can recall, clearly and cogently, where sections of text appear on the page. "Generally," Sam says, I have a memory of that." This is not an instance of photographic memory but of having such an intimate connection with the text that certain of its details arise in his mind like pictures that he can locate with accuracy in the original text. Like the others, Sam, too, experiences a "drop off," a decline in memory when confronted with the electronic screen. Sam suspects that this decline in recalling has to do with the fact that his brain has been conditioned not to "remember" something that can be "called up" on the screen when he types "a word on the search engine." Surprisingly, Sam attributes the perceived differences in the power of memory to the fact that, while using print, the brain expects of itself to remember with great accuracy details about the page while, in the second instance, the tool (the computer screen) has conditioned the mind not to expect to remember details with the same accuracy since the search engine can do it so effortlessly (for the brain).

Like his colleagues, Theo believes that memory operates differently in print and electronic environments. Perhaps Theo offers the clearest statement about this dichotomy that he attributes to the experience of the text's format or organization on the page. In recounting his experience with tablet reading, Theo finds the recollection of specific items on the printed page "weird," marveling about

how able you are [to remember]. This passage was about in section 8 or maybe it was in chapter 3, you roughly know where it is, you know. Whereas [with] Kobo

I would be hard-pressed to find something because you can't flip back, you can't go from page 300 to 51 in one swoop.

According to Theo, then, the medium (in his case the Kobo tablet) makes it difficult to navigate back and forth through the pages—and to remember—in order to search for something that he was trying to find but has no idea of where to find it. Theo is “hard-pressed” to find on the electronic page whatever he might be searching for because moving from one page to another cannot be done “in one swoop,” something that he finds possible in a print environment. This ease of locating an image or a passage more readily in a print medium seems to also contribute to the retention of information.

Kar further suggests that an individual's memory and recollection may actually be strengthened by reading print, which requires closer attention, and weakened when skimming and scanning an electronic text. Kar, in fact, points to printed text he has read as a trigger to memory, something that does not happen in an electronic environment.

Here is what Kar has to say about how he actually interacts with his books in his office:

you know, again with books I find that when I am working on a problem and sometimes I can look up on my bookshelf and see the book and remember that there was something in there that might be helpful. And you know, I find the, um, having the physical book, you know, I'm writing something and I want a snappy quote or something, oh, John McPhee, just the quote I need. Uh, you know, from that perspective I like having print available, it is a trigger to remember things.

Kar's memory is thus triggered by the physical presence of a book he can see on his bookshelf. And, so, he can remember where a certain passage is located in a certain book simply by looking at the actual book in his shelf. Seeing the physical book, he recalls a

certain quotation that he has read in that book: his physical proximity to the book on his office bookshelf elicits a memory of the quotation he just happened to need. This is not part of Kar's interaction with an electronic text, which does not seem to trigger such a visceral, immediate recollection.

Presumably, print reading that results in the writing of indelible images or passages in one's brain and which is capable of triggering immediate recollection must involve careful and distraction-free reading—in other words, deep reading. Deep reading involves the act of sustained reading of a text or of texts for an extended length of time with full attention and deep concentration. Obviously, deep reading requires limited to no distraction. All interviewees were asked about their experiences with deep reading and whether such reading was limited to one or another medium. The majority of those interviewed voiced a preference for reading in a print version in cases when they had to concentrate because they were dealing with difficult notions or ideas that were important to them. A few of my interviewees stressed that deep reading could be done only with the print medium since the printed page made it possible for them to concentrate more. They also emphasized, again, the experience's physical aspects, such as the freedom to hold and handle the text, the comfort of sitting and laying down with a text, and the possibility of engaging with the text on paper.

Print, several of my interviewees argued, helps them concentrate more and makes possible deep reading. For instance, for Sam deep reading requires concentration that, in turn, happens when he is able to write on the page and make notes:

I gravitate toward print especially if I can sit in my special chair and especially during the summer when the teaching is not intense . . . my books are completely

marked up. I have a dialogue with the author, is how I feel. I have a pencil in my hand. I have marginal comments. I underline connections to other parts of work that I'm doing and, so, I like to write on the book, and that kind of thing I can do on my iPad [but] I still like to have my pencil in my hands and when, I do my own work, . . . sometimes I will print out and I find that I am a much better editor, I notice things flow. The repetition of words that I might want to change, that kind of thing I notice, those things more on a printed page than I do on the screen.

Certain conditions, like idiosyncratic habits, are to be observed by Sam prior to diving into “deep thinking”: he needs to relax his body and mind by sitting on his “special chair” and must be able to make notes for himself by hand, something that will help him in making connections to other aspects of his work. Most interestingly, Sam associates deep reading with editing and writing. Those marginal notes, the underlying of words or phrases, the very handling of the pencil trigger his deep reading.

From my conversation with all of my interviewees, it would appear that reading—and especially deep reading—is a practice that is inseparable from the act of writing and editing. This may be because “reading” for these academics involves not only basic reading and learning but also the use of this in their own writing for others. The act of reading is, thus, indivisible from the act of writing. Certainly, for Sam, the ability to read and write simultaneously helps him dialogue with the authors of certain texts and that, in turn, helps him in his own work. However, not all of my respondents seem to think that deep or insightful reading is possible only via the printed page. In her response to my question about deep reading, Sue is unequivocal about the possibilities of the electronic text and her own capacity, in reading onscreen, for clear, incisive insight:

I think my tendency is to read more closely when I have it on my computer, now . . . I find that I dialogue more with it on my computer, now. It is like I am talking to it, it is like somebody, it is almost like somebody is talking to me. Then, as soon as I can see something, you know, this sentence doesn't sound right, here you need to move this section, I might just be saying, wow, I never thought about that before or that's a really, really interesting point of view.

Unlike Sam, Sue finds that she is able to have a lively dialogue with texts available onscreen and that this dialogue helps her experience and notice much more compared to when her reading is done on paper. Translating the words on the screen into those of a person she imagines to be speaking to her, Sue is able to arrive at the kind of insights that are sometimes possible only through dialogue with another person who is as engaged as herself.

Though for Sam and Sue "deep reading" is done in print and onscreen, respectively, in both cases it does take the form of a dialogue or conversation with the author of a text. Sue seems to be silent on the importance of writing and editing in "deep reading." On the other hand, Fran associates onscreen reading with editing and revising, though she finds focusing difficult: "I associate screens with the ability to edit and change and as a reader that's very beneficial, and as a reader I tend to find it more difficult to focus and less unable to pick up things [from the screen]." It is for this reason that when given the option to read an article or book online, she invariably decides to print it off since "I know I won't be able to remember if I read it online." Fran thus reiterates and emphasizes the enormous difference most of my interviewees find: Retention and memory are the purview of print reading since most of these readers find screen reading

to be a poor substitute when comprehension, reflection and retention are important. Lucy puts this succinctly and authoritatively:

[if] I am having to really work through a very heavy text or a very mathematical text, then with apologies to the forest, I want the hardcopy, so I am reading and scribbling all the time so that I can flip back and forth very easily through the pages.

For Lucy, as for the majority of my interviewees, when it comes to having to concentrate and work through dense, complex materials or problems, the print version is necessary for many of the same reasons that have been explored so far in this chapter.

Before I began to conduct the interviews for this study and even after I had collected my results and transcribed them, I had a pre-conceived idea of what some of the themes and answers might be. But something that I did not anticipate (which, especially considering the individuals I was researching, I should perhaps have) was the idea of the institution. By institution I mean the academic job, its milieu, its demands and requirements. To an extent, I came to realize that how academics conduct their work, or reading for that matter, has much to do with the specific training, requirements and expectations of their job. Regardless of professors' stance or preference for print and digital media, they are indeed expected to be able to work with computers and to function at a high level when it comes to working onscreen. This expectation comes in the form of answering e-mails, searching for materials online, and—perhaps most importantly—writing and editing for teaching, research, and publication purposes.

Some academics appreciate so much being able to read and grade students' papers onscreen, that they speak of this as being "liberating." Sue, for instance, takes pleasure in

being able to do all her marking online and emphasizes her gains as well as those of her students:

I also read almost all of my articles online now and, from time to time, I will read prints; but I don't know if it is my preferred or if it is the nature of my life. I don't know if I preferred, if I definitely prefer reading my students' assignments electronically because I can read them and then I can mark them up and use the editing features and the review features to give them very specific feed[back] and direct feedback, and they can read my writing. I have terrible awful penmanship or penwomanship, my handwriting is awful. I struggle with that, and this [the digital medium] has been very liberating for me. Having electronic assignments given to me, I am a lot more faster, I am a lot more efficient, and it is more effective because they can actually read it and they don't have to decipher it.

Sue is unique in feeling that the electronic medium allows her to be a better educator and scholar. For example, the electronic medium has liberated her in respect to giving clear, timely and effective feedback for her students. One could argue that it is the institution that, by setting certain expectations of her as an educator and scholar, has "pushed" her into using the digital medium, which she finds more convenient and efficient in the performance of her work.

I would like to end this discussion and listing of examples by quoting at length a response by Ben about how the institution is contributing to the pressure of using the computer and digital media. Considering his work as a university administrator, Ben spoke of his sense of the shifting nature of how things are now done and how he is expected to do his job:

The other thing that happened is that NSERC and CIHR are now doing all of their things digitally; and when I have been on scholarship or grant selection committees in the last few years, I will notice these things showing up in digital format, and paper to [an] extent. It's interesting because everybody when I started doing this, I remember being in a meeting in the mid-90's where everybody had arrived with the box the size of that one full [pointing to a big box full of papers], like that one over there, for the meeting and we would, whenever we finished viewing any grants, we would ceremonially leave the table and throw the paper into the recycling and, somewhere in the middle it switched to where you went to the event [and] everybody [would] be provided with laptops.

Ben thus points to the turning point some time ago when he became aware that paper was no longer used and everything started to be available electronically so that everyone had to start relying on laptops and therefore reading grant applications online. This turning point arrived some time ago not only to the world of administrators but also to the world of university teachers, researchers, and scholars. Has it made a difference? When I asked Ben if my impression was correct that "people had read more of the materials when they had it on paper" rather than in an electronic form, he replied matter-of-factly: "it['s] just [that] the quality of the discussions seems to have declined." And yet, as this discussion reveals, even after the turning point came and went, there are many academics who, when they wish to read deeply and reflect and engage with the text on a deeper level, print off their electronic materials and read them in print.

It would be dangerous to conclude, along with Ben, that the shift from print to digital formats in university offices and committees brought about a decline in discussion

and thinking. There is much to be said perhaps for the advantages of one medium over the other when it comes to reading and specific kinds of reading in particular. For instance, does the reading activity suffer in terms of comprehension, depth, range, and reflection when using a computer screen and a computer, which make possible instant access—to the point that the brain may be becoming conditioned to retain and remember less because any type of information is available at a single click of the mouse or a light touch of a screen? Here I have delved into the rich and insightful comments of eight university professors who were able to provide interesting insights about this and other questions. Though not always agreeing with each other or offering me easy ways of approaching what is, after all, a complex, difficult, and evolving discussion, their insights proved wonderfully rich, revealed much to me, and demonstrated the fact that reading in print is not about to disappear.



## CONCLUSION

In this concluding chapter I gather together all of the threads and themes discussed in the previous chapter in order to draw a few basic conclusions about how the medium affects the nature of university instructors' reading experiences. This project was designed to help me gain a better insight into the reading experiences of academics at UNB; in particular, I attempted to discover how experiences of reading differed—if indeed there was a difference—according to whether a text was read on the printed page or on a screen. It must be noted that this research was also designed in order to allow me to move away from the existing pro-con debate about which medium is better for reading in an academic setting. As well, I have taken for granted during this research that a researcher is unable to escape her or his biases: qualitative researchers, indeed, are open about making every effort to “bracket”—that is, acknowledge and set aside—their own biases. The research, then, was focused more on my questions, the interviewees' responses, and my findings about the personal experience of reading and how professors make their decisions about which medium to use.

Surprisingly, none of the interviewees expressed a preference for only one medium over the other at all times and for all her/his reading activities: rather, decisions about which medium to use for a given reading task are based on a variety of factors. Although uses (that is, the way a medium was used and for what purpose) varied from individual to individual, the majority of the interviewees used not one or the other medium but, as already suggested above, a blended method of both print and digital media for reading and for working. What differences there were could be observed regarding when, where, and how each interviewee used each of the two media in her or

his reading. It is important, thus, to suggest that one of the key findings of my research is that, irrespective of age, gender or discipline, each interviewee, first, used both media and, second, no interviewee demonstrated a strong preference for one or another of the two media. Though constituted differently in each case, individual preference for one or the other medium was premised on specific use, motivation, and convenience.

One of the strong themes emerging from my research has to do with the role the medium plays in the reading experience, supporting McLuhan's contention that "the medium is the message." Words on the page or on the screen constitute only part of the information that is delivered to the reader since it must also be kept in mind that the way the text or language is delivered plays an equally important role in the way it is experienced by the receiver of the information. Especially currently, when a large portion of our news and literature is delivered and received on screen formats, we have to take inventory on how the method of delivery (the medium) is affecting the way that we experience the written or the digital word for that matter. My research suggests that when we access and thus receive information in the form of a printed text, this text appears to be more finite (and this adjective is not used here pejoratively) or fixed in its ability to express itself; on the other hand, text accessed in a digital medium appears to be less set or fixed since there seem to be countless ways in which the information is delivered to, and consumed by, the reader. Several of the interviewees addressed and confirmed the fact that perception (along with recollection) of details appearing in a printed text is different (and often stronger) when compared to that formed during onscreen reading.

Moreover, such elements of onscreen reading as hyperlinks and audio and video capabilities appear to have a great influence on the way in which the text and its message

are experienced and consumed. Additionally, the connectivity to the World Wide Web, which is an inevitable characteristic of online reading, promises the reader unlimited access to other works and various kinds of information that may manipulate or distort or simply alter the original meaning of the text—though the phrase “original meaning” carries with it its own “meaning” in terms of authorial intention, transmission, and readerly reception or consumption, all of which can be indeterminate and unstable. The point nonetheless is that, for a reader (and for my interviewees), the dynamics of onscreen reading are quite different than those of the printed word. My research supports the proposition that the two kinds of reading (print and onscreen) are perceived by my interviewees as being different. One thing that all interviewees agreed on, nonetheless, was that given the often multiple demands on a reader’s attention during reading that takes place onscreen, that reading experience is quite different in nature and perhaps in terms of retention, continuity, and depth from reading in print.

As my literature review chapter shows, this difference in the nature and perhaps the quality of the reading experience is something that has captivated those who have studied the topic. Walter Ong, for instance, has discussed in detail the phenomenon of the human mind’s development of new technologies which, in turn and subsequently, “alter” the way that mind receives, perceives, and imagines itself and the world shaped by that specific technological change. Ong, therefore, proposes that a shift in communication and media formats and delivery alters the way in which readers not only read but also think. Regardless of an everyday reader’s or consumer’s understanding (or even awareness) of how technological innovations and the delivery of materials may work, such changes, according to Ong, have a profound effect on the reader’s mind since her or

his very “epistemology” shifts sufficiently and perhaps irrevocably so that her or his understanding of the world is modified. Subsequent thinkers, researchers, and writers have followed the trajectory of Ong’s theory to argue that the introduction of technology in our everyday lives and reading practices effects an actual (and measurable) change in the physical makeup of our brains themselves: the way our brains are “hard-wired” changes under the influence of technological change.

An alternative perspective on such matters to those discussed by Ong is that of Bolter and Grusin who propose a different view regarding how changes in the medium involve (and also participate in) a particular way of experiencing the written or digital word. Unlike Ong, who perceives newer technologies (such as those of changing communication and media structures but more specifically the changes from an oral to a written culture) as obliterating older technologies and the way these are experienced by, in this case, the reader, Bolter and Grusin see these changes as not making older mediums disappear but rather as being refashioned in such a way that is different than the original one but still maintains many of the same features and principles of the original medium.

Based on my research, it is my conclusion that both of these theories are useful in understanding my interviewees’ habits and attitudes to reading preferences. On the one hand, all of my interviewees are strategic (and often practical) about which medium each chooses to use for a particular purpose or in a particular situation. For instance, in all cases these readers opt for the most convenient medium. This finding supports the idea that these readers are of the opinion that content remains unaltered by the medium. On the other hand, they identify important shifts in the reading experience that happen when they move from one medium to another, which, in turn, supports the idea that the medium

shapes the message. My results, thus, provide partial support for both Ong's and Bolter and Grusin's theories respectively. I am mindful, nonetheless, of the fact that since screen reading is relatively new (in most cases, my interviewees started their education, and in a few cases their careers, by using primarily if not exclusively print), perceptions may shift since currently we are still in a period of transition.

What complicates matters is that, for my purposes, the literature review and the ensuing discussion have involved both a way of educating myself but also an attempt to allow for my own biases, understanding of, and familiarity with the subject matter at hand to be explicated so as to offer to the reader of this thesis sufficient ground for considering the evidence and arriving at her or his own conclusions. It is not surprising, then, for the careful reader of this thesis to surmise that my research and project have raised more questions than it may have answered. And though I personally find Bolter and Grusin's theory to be more nuanced and more attractive than Ong's, I can't in good conscience discount the latter's (dystopic in my estimation) claims regarding the changing geography of the human mind in response to technological change. More importantly, my interviewees offered me no occasion for testing Ong's (and his followers') specific claim since, despite the fact that they recognized and discussed shifting habits and preferences in reading media, nobody addressed the possibility that online reading has changed the perceiving mind to the point that it is unable to appreciate the sense of engagement offered by print reading. Nonetheless, all of my interviewees were clear on the fact that the same perceiving mind (their own) reacted differently to the two different media and, moreover, that their reading habits themselves were influenced

and differed depending on the specific reading medium used while carrying out a specific task requiring reading.

I have been candid all along, I hope, that, in my opinion, forcing a choice between the two theories outlined in my literature review and summarized above, is neither necessary nor desirable. In fact, I would go so far as to argue that, first, my encounter with a variety of theories and research problems as part of my literature review prepared me well for developing a good understanding of the issues at hand, for asking the right questions during the interviewing stage, and for shifting efficiently through the variety (and richness) of the responses I was able to garner. Second, the honest acceptance of my own biases on this topic of study enhanced rather than inhibited my ability to appreciate and, in good time, synthesize my interviewees' responses. And third, the qualitative nature of my approach and this approach's open-ended character made it possible for a much more nuanced and flexible set of data and of interpretation.

Many of the questions I considered and asked of my interviewees were based on their own, particular, personal experiences of reading in an academic setting but also as part of their own personal life—though it was clear from the responses that, when it comes to academics, reading for professional as opposed to personal or everyday purposes could not be easily differentiated. The purpose of the questions I posed was premised on the idea of “exploring” any differences—as the interviewees themselves may have perceived such differences—between print and on screen reading and, as well, the shifts they experienced or perceived when reading at work as opposed to at home or when on holiday. Significantly, each one of my interviewees wanted to discuss her or his reading as something that happened not just in an academic setting but also at home as

well as in other settings such as holiday spots or conference locations and occasions. An important finding, thus, was the fact that these academics read using a variety of media and read in a variety of settings for work purposes. Moreover, this finding can be extended to their reading for personal reasons—to the point that it was often difficult to separate what kind of reading is done for what reason and in what medium. In other words, reading methods and the choice for, or preference of, a specific medium is not determined by whether one is reading for work or personal purposes.

One of the topics I was especially interested in was that of what medium these readers preferred to use while reading for their own writing and publication; for example, I was interested in asking them whether they find themselves gravitating towards screen-based reading such as their computer screen and tablets or print formats like books, papers, and printouts of journal articles. As well, interviewees were asked where in terms of their physical situation they were while conducting such reading activities, whether in their offices, home or while commuting from one place to the other. All interviewees were accustomed with, and comfortable in, using technology (for instance, every individual owned and used a tablet or laptop for work and pleasure), and all enjoyed access to both print and electronic media. For the most part, the interviewees claimed that using the iPad or laptop was a convenient tool for such occasions as those when they found themselves away from their offices, especially during travelling to conferences. A lot of online reading and communicating took place on the screen when subjects were travelling from one place to another. The reason given for this preference was the convenience of reading on the screen while away from the office. Thus, instead of dedicating a lot of space in their suitcases to heavy books and work documents, these

professors preferred to upload and take as much information and text with them as necessary in the form of a small transportable device like a tablet. None of the interviewees argued that what determined this choice was that she or he enjoyed more or found it better to work onscreen rather than with a printed text while travelling; rather, most individuals explicitly attributed the choice for the use of onscreen reading and work while travelling to simple convenience and accessibility. In an aside, I should mention that an interesting aspect of the present topic which I have not highlighted in my discussion is the impact of print and screen reading on the health of the reader. Without having a medical background or—in my case—without doing extensive research and reading in the literature, I find it difficult to offer concrete assertions and argue that one medium is better or worse when it comes to beneficial or detrimental impacts on readers. Although it may be possible to make a few points based on physical or health impacts as described by the interviewees, I believe that emphasizing this element of the discussion would not be justified since I believe that neither my questions nor the responses I gathered privilege this specific aspect of my topic. As a result, I have been content to limit my comments to the fact that many interviewees did discuss the significant amount of strain—especially eye strain but also muscle strain—that results from spending extensive amounts of time reading onscreen. Yet again, one could make something of the back strain that a reader avoids by not carrying around many books in, let's say a backpack, choosing to carry volume upon volume in their iPad or tablet. In other words, there is a place in this discussion for both physical but also other kinds of health considerations, but this has not been the focus of the current discussion.

A few of the same respondents who prefer to take along a tablet and leave behind bulky print material also made reference to the fact that technology itself was not without its flaws or disadvantages. As a result, a few of the interviewees indicated that, on occasion, the simplicity of using the page was appealing since it may be preferable to leave an electronic device with a screen behind because it would mean that the reader would not have to worry about charging or even losing her or his device at an airport. One of the concerns was that the loss of a tablet poses greater risks since it would also mean the loss of personal data and security information stored in such a device, something that is never a problem with the loss of a set of printouts, which are much more easily replaceable. Thus, limitations in current technology, such as battery life, were key determinants in interviewees' decisions to take or not to take along printed reading materials. Moreover, my interviewees exhibited what I would term an exhilaration that is associated with the convenience offered by technology but also a phobia exhibited, often simultaneously with the exhilaration, regarding the difficulties and problems introduced by technology's possible failures, inconveniences, and particular challenges.

The vast majority of my interviewees admitted that, were the purpose of their reading to be an act of concentration and of performing "deep reading" on subject matter that required constant attention to detail, they would choose a printed version. Some attributed this to an expectation that reading print allows for superior concentration and for subsequent retention—even to the point that reading print allows for the later recollection of where and on which printed page certain ideas appear and where parts of text, especially those presenting images of things, are located, something that is not

possible, some of my interviewees suggested, when one is reading onscreen. Consistent with what my literature review has pointed to, this finding is significant even when one takes into consideration the current, transitory nature of reading habits and preferences of readers who are familiar with both print and onscreen reading as opposed to an earlier generation of readers who would have been familiar with only the first and a later generation of readers who will be familiar with both but without, perhaps, having a sense of what the world of reading was when print was the only choice.

As briefly mentioned above, a number of interviewees suggested that the digital medium is conducive to distraction that leads to reduction in the ability to concentrate. In fact, the arrival of e-mails and messages, while reading, that must be answered or at least viewed immediately, was one source of distraction that many of these individuals recognized and even resented but do not seem to have been able to avoid. One could conclude from this—though I hesitate to do so unequivocally—that reading onscreen is even more risky when that reading is done online and also that online reading is likely to promote interruption, loss of direction (if one were to pursue pathways offered by a “destructing” piece of information), and retention problems. In other words, several of the interviewees were resolute in their belief that “deep reading” is possibly only in print form since onscreen reading is fraught with the risks of interruption and destruction.

To return to an earlier point in order to develop its implications a bit further and to synthesize several of the threads presented so far, I would claim that my interviewees suggested that they seemed to have a harder time following a train of thought or remembering things they read onscreen as opposed to reading in print. Could such a finding be used, possibly, to support the claim that new media and technology are

actually changing the way we think and that this is a physical change that is taking place within the 20<sup>th</sup>-century human brain? Or could such a finding be directed differently in order to argue that print reading is superior to on screen reading since it aids memory and concentration and comprehension and reflection—though, again, I am reluctant to suggest such a thing, it is true that the interviewees were almost unanimous in stating that reading on the page had an advantage over onscreen reading when it came to focusing and concentrating; however, these same readers insisted that what was even more telling in making the case of print over onscreen reading was that, in the case of the former, the ability to use tools such as those of writing and making notes in the margins of printed texts was even more important in boosting memory, concentration, comprehension and reflection. Clearly, there is much more to the experience of the medium than the medium itself: important considerations involve readers' intentions as well as the way in which readers choose to interact with the text. Besides demonstrating the complexity of the topic and the danger of arriving at a set or prescriptions, this kind of discussion also shows that much more than a simple dichotomy or a single answer is suggested by my findings since, among other considerations, one has to focus on not just the medium but also the individual reader's intentions and the way she or he uses certain tools, understands the medium at hand, and practices her or his reading. In other words, the present research question is complicated (in wonderfully rich and evocative ways) by the fact that the subject (reading) has as much to do with the medium as it has with the subject of the medium—that is, with the individual doing the reading. Moreover, this conclusion suggests that neither Ong nor Bolter & Grusin are completely correct since they are attending completely and exclusively to the effects of the media on the reader,

without considering the conscious choices people make based on their experiences, circumstances, and needs. Ultimately, a new theory may be necessary that goes beyond the ones available, one that posits the importance of various factors in the choice of reading medium. I consider my research and findings as contributing to the initial stage toward developing such a theory that pays specific attention to the conscious choices made by readers that are, in turn, based on their individual experiences, current and changing circumstances, and immediate needs.

A theme that became clearer as I examined the transcripts and began the writing process was that of how work and leisure reading have begun to keep company in strange ways. With the advent of technology that allows one to read anything and to do so anywhere, we can see a shift where there is less distinction being made between when one does work related reading to leisure reading practices. Access might be the major factor for this. Because one can access materials via their tablet, computer and phone they have the ability to not only practice their leisure reading (i.e. the news or social media) which can be quickly transitioned into using those same devices and mediums to practice their professional academic work. Therefore, the lines are slowly becoming blurred when one thinks about categorizing work related reading to leisure reading.

Lastly, I would like to discuss briefly some of the questions raised by the research as well as future work that can be done on this topic. One question I have asked myself throughout this process is how will academic work be changed in the long term when so much work (in some cases, all of one's work) is now done with the aid of technology? Many of the professors I interviewed remembered a time when they did not use the computer or Internet because the technology was not even available to them. It would be

interesting to see if academics who started as digital natives (who belong to the generation that grew up with computers) differ in their preferences and in the way they conduct themselves in terms of their work from those who, at least early on in their careers, did work and studied without the aid and convenience of computers and online databases. Will the work being produced by this younger generation of academics be different from that of their predecessors in terms of intention, productivity, methodology, and so on? Will the point of view, approach, and therefore insights of younger academics be different from those who started their careers in the 1980s when onscreen reading and the Internet were becoming more widely used? As more reading is done onscreens, will this contribute to the production of different results than those produced by older academics who grew up in a different reading environment and still do much of their reading in print? Will the quality of academic work be different given the convenience and ease of research conducted on screen and provided by accessing large amounts of information available through the Internet? And how will the mindsets and, perhaps, the physical brain itself alter over time while more and more hours will be spent in front of, and while interacting with, the computer screen?

It may not be any time soon that such questions are answered thoroughly or adequately. For instance, my interviews suggested the emergence of a trend whereby academics would read onscreen only brief pieces or shorter articles but would still use print for carrying out more intense reading designed to shape their research and writing. Even this reading, these individuals suggested, was different in nature than print reading because it involved skimming and speedy “taking stock” of the reading material. More focused reading required, these professors suggested, a different approach and, in most

cases, reading in print—that is, much onscreen reading could be viewed as preparatory work that eventually contributed to the process of selecting the material to be read in print and more thoroughly and carefully.

It might be appropriate to end my discussion as I began it, by asking, “What is the future of reading in print and of the book?” Certainly, McLuhan was wrong when he prophesized, so many years ago, the death of the printed book in the electronic age. (McLuhan) Well, what will happen to books and hard copied text, which was for so many people and for so many centuries the way one read? What will happen to the book and print culture now that the majority of texts purchased and accessed by academics come in the form of online formats? What is to happen to the book when more often than not publication companies choose to convert all of their books and published new work in digital formats? Of course, such choices are made for many reasons, one being that, presumably, the cost of digital texts is significantly lower than that of printed books. What will happen, then, to the book itself? Or is the book not in danger? From the conversations I had with my subjects, it would seem that many still wish to be able to have access to digital books but also, certainly, have physical books made available to them—and for many reasons other than that of nostalgia. In other words, books and printed text are still well and alive. What may happen in the future is difficult to predict, though another sixty years from now we may be surprised by the fact that McLuhan’s dire prediction about the future of books is still wrong.

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## APPENDIX I

In trying to negotiate the difficulties of qualitative research of the kind I am proposing here, I have used as my guide and inspiration the scholarly work and the methodology of Dr. Rose. In her books and scholarly articles, Rose begins by highlighting the importance of viewing technology under—or with—a poststructuralist lens. Resisting the delusion or desire for research's absolute right to accuracy, objectivity, and certainly, poststructuralism opts for a journey of discovery whose methods and findings might be or might seem less poised and conclusive than those of hard, quantitative scientific inquiry—though there are other, ensuing benefits to be discussed below. I have planned to follow, then, Dr. Rose's poststructuralist methodology which she describes or defines as “largely based upon [an] understanding of poststructuralism as a way of thinking which is informed by a sensitivity to language's unreliability, lapses, inherent biases, and the way in which both truth and power are negotiated within communicative acts.” (7)

Post-structuralism is the rebellious child of structuralism, the dominant French intellectual movement in the 1950s and 1960s which studied the fundamental structures of cultural artifacts, including works of art and texts, using analytical and rational notions borrowed from such disciplines as linguistics and anthropology in an effort to produce a scientific interpretation of cultural and social structures. Post-structuralism interrogates structuralism, arguing that in order to understand the underlying structures of culture and history, one must understand both the object of investigation and the epistemology that produced it. Moreover, since the production of culture is a process that involves possible

misinterpretation and bias, post-structuralism privileges productive instability and intriguing unreliability over structuralism's stable, binary, scientific hierarchical analysis.

Dr. Rose, then, employs an approach derived from poststructuralism in her investigation, which deals with language's philosophical implications in the context of the advancement of technology. In the face of the inflexible gospel of Net-enthusiasts and Luddites according to which technological advancement in human society has (can only have?) positive outcomes, Dr. Rose interrogates the key principle of "techno-utopianism," the notion that all human desires and wants may be achieved and satisfied through technological means. Characteristically, she questions Langdon Winner's (1986) "almost religious conviction that a widespread adoption of computers and communications systems along with easy access to electronic information will automatically produce a better world for human living" (36). Therefore, Dr. Rose undertakes to discuss popular myths and optimistic stereotypes about technology's continued technological advancement. Following the example of Michel Foucault, Dr. Rose carefully examines how traditionally—and more so in modern and contemporary periods—technological advancement has been viewed as a panacea that promises unceasing progress to a utopian technological society. Foucault's radical interrogation of claims made by modern science as to the nature of scientifically grounded truth—especially the truth of human nature—is posited on his notion of the contingency of historical forces shaping the understanding of biological, psychological, and social "reality." The notion of "contingency" introduces an element of unreliability and linguistic unpredictability that ensue in offering the researcher the opportunity to resist scientific rigidity in favour of nuance and gradation.

Consequently, in her work, Dr. Rose is not interested in arriving at absolute truths or concluding that one side in the debate (such as the debate between luddites and philistines) is correct while the other is wrong; rather, she raises issues, analyzes perspectives, and probes into areas and asks questions about levels of signification left alone by “science” in an effort to better understand the uses and possible abuses of technology. Seeing herself as an intellectual rather than a scientist, she explains her position in this way: “. . . being an intellectual does not mean seeking for definitive answers but being, I think, open to the implications of unanswered questions, and to the new questions which only unanswered questions can engender.” (249) The value of being in a continuous state of doubt, speculation and wonder and of been able to tease out the implications and nuances of a particular problem or question is succinctly and deftly presented in the above quotation. An aspect of this quotation that is also significant here, it seems to me, is the writer’s willingness to employ but also to query the vary nature of her methodology, something that is neatly articulated in a parenthetical elucidation of poststructuralist “disbelief”: “I think”! Dr. Rose’s study of the nature of technology and that technology’s impact on the potentially redemptive act of reflection is valuable especially because its methodology and topic are so intimately and closely connected since poststructuralism as methodology allows for a probing and interrogative lens that is not tied to scientific rigidity and reflection as an open, flexible, supple intellectual pursuit necessitates or is facilitated by such a methodology.

Along with many examples from media sources and her own personal experiences, Dr. Rose also uses a brief, historical case study entitled “the McKenna Experience.” This is a look at the New Brunswick Provincial government under Frank

McKenna (1987-97), which sought to create a climate for the development of a technologically advanced climate, culture and economy. McKenna's vision was radical, visionary, full of assertiveness and daring: "Blazing a trail across the province, linking it to the rest of the globe, Premier McKenna's information highway boldly proclaimed that, to be civilized, New Brunswickers must become computerized." (164) Significantly, McKenna's vision was premised on his definition of "civilization," which, curiously, he understood not traditionally but in terms of technological expertise and proficiency. Of course, the term technology (*τέχνη*, art or craft and *λόγος*, word, speech, discourse, reason) is defined by the OED as "A discourse or treatise on an art or arts; *esp.* (in later use) a treatise on a practical art or craft" but also as "A particular practical or industrial art; a branch of the mechanical arts or applied sciences; a technological discipline." In other words, McKenna's technocratic vision ignored the classical definition of the term in favour of a focus (even an obsession) with the computer and computer literacy as the cure for all the province's historical economic ills.

Using theories propagated by Foucault, Dr. Rose offers a lucid analysis of the phenomenon of Premier McKenna's dream to turn New Brunswick into a technological haven. Her careful discussion points, first, to the real political influence that initiatives like McKenna's can have since they are able to control the discourses of power; in turn, when the discourse of power is such that it control and is controlled by technology, technology itself may have a significant influence on society itself and the discourses and narratives in which members of society are immersed. Though a government and its technocratic branches are not necessarily in control of what citizens think and do, they do exert much influence by controlling what and when particular discourses (with their

ideological and power-driven corollaries) are introduced and “implemented.” In any case, Dr. Rose leaves no room for doubt when she defines McKenna’s political legacy as one in which technology was at the forefront of political vision, discussion and action.

One reason I have chosen to outline this example of the McKenna experiment with which Dr. Rose deals in her doctoral thesis (and her first book) is because I have discovered that in my own project I am trying and use many of the same theories and readings she has used in her own attempt to explore and make sense of the activity of reading (we can call this the encounter with the logos in its variety of media) and that activity’s connection with reflection (we can call that *techne*), the activity which takes or should take place during our reading. In other words, the discipline under consideration here is that of *technologia* understood as the art of reading which traditionally issues in reflection as opposed to *technologia* as reading through electronic or onscreen media, which can be seen as reading divorced from reflection—this last word defined in the *OED* as “[t]he action or process of thinking carefully or deeply about a particular subject, . . .; contemplation, deep or serious thought or consideration, . . .”

## APPENDIX II

### *The thirty-one Question Questionnaire*

1. *What is your preferred reading medium: print or electronic?*
2. In what situations do you find yourself reading text appearing on a computer screen and in what situations/contexts do you find yourself reading hardcopy printed text?
3. When reading for pleasure, what medium do you gravitate towards?
4. *When reading academic texts (for the purposes of research or teaching) that require a certain level of concentration and or attention, what medium do you find yourself using?*
5. Do you use or own an electronic reader such as a Kobo or iPad? Could we discuss why or why not?
6. If you do own such a device, how do you use it and how much do you enjoy using it in reading? What kinds of things do you read on such a device?
7. When you read printed text (novels, newspapers etc.) as opposed to screen-based media (computer monitors or tablet devices), do you find a difference in the amount of information that you are able to recall and remember?
8. In your professional work, do you ever have to go back to the original text in order to recall, clarify, or find materials to quote or paraphrase for the purposes of your teaching or research? Which of the two formats (printed text or computer

monitors or tablet devices) is the one you go back to for this purpose as opposed of one you may not need to go to?

9. Do you make notes to yourself when you read? If you do, in which of the two formats (printed text or computer monitors or tablet devices) do you find yourself making notes? What is the purpose of this note taking?

**10. Do you read for long stretches of time? If you do, are you likely to do this with printed text or computer monitors or tablet devices? Why?**

11. When you read, do you find that you lose yourself in your reading—whether this be the argument of a book or paper, the narrative of a novel or story and so on? If you do such “deep reading,” does the medium matter?

**12. Have you noticed a shift in terms of the amount of reading you do in your own life from the printed text in favour of screen-based reading? If you are aware of such a shift, could you discuss when it may have started?**

13. If you have noticed a shift in terms of the amount of reading you do, what may have been the reason for this shift?

14. If the reason for this shift has been the availability of material on the web, can you discuss if there are any differences between the ways you used to research topics before and how you do so on the web?

15. Do the powerful searching and filtering tools available for web-based research change the way you do your work? Do you ever reflect on this matter?

**16. If you do use the potent searching and filtering tools facilitating web-based reading and research, how has this changed the way you absorb information**

*and has it changed the kind of reader you have become—in other words, are you a less patient reader, a quicker reader, a more informed reader?*

17. Do you feel that “the potent searching and filtering tools facilitating web-based reading and research” help you or hinder you? Do you find the information available to you today helpful or overwhelming? Why or why not?
18. Given the availability and the ease of the potent searching and filtering [web-based] tools,” how would you answer the following question: Is more information better or worse?
19. Do you have a special place for “deep reading”? If you do, what does it look like?
20. When you read and/or research online, how are you affected by electronic attention triggers of what we could call the “interruption technologies” of interactivity, hyperlinking, searchability, multimedia and so on?
- 21. *What do you think of the various alerts (mobile phone, Facebook or Twitter alert blinks on on-screen, e-mail alert) available today? Do you have any insights about the place of alerts in today’s onscreen reading?***
22. How do you react to anyone like me suggesting that to leave alerts on creates “a cacophony of stimuli”?
23. Are you the kind of reader who would read a Dickens novel using a Kindle or another tablet? Why or why not?
24. Researching the shift from reading to power browsing, Ziming Liu wrote in 2003 “the advent of digital media and the growing collection of digital documents have had a profound impact on reading” (quoted in Carr 137). What do you think about this?

25. How do you understand the term “non-linear reading”? Are you a reader who enjoys reading of sustained attention or reading that privileges speed, browsing and scanning?
- 26. If you think of the reflection that happens during and after reading, is there a difference in the quality and duration of that reflection when you are reading printed texts as opposed to screen-based texts? In other words, do you reflect more while using one medium as opposed to the other?***
27. William James, the American philosopher and inventor of the philosophy of pragmatism, said in an 1892 lecture “the art of remembering is the art of thinking” (quoted in Carr 181). Can you relate James’ statement to reading print as opposed to reading online and/or in a digital format?
28. As a reader are you more distracted or less distracted when reading screen-based texts online? Does one of the two media offer less distraction than the other?
29. Do you think that online and/or on-screen reading and the Net and digital technologies have any real effect on the way our minds operate?
30. If you do think that there is a change, do you think that there is any way to prove it?
31. Richard Foreman, an American playwright, describes his own tradition of Western culture as involving “a man or woman who carried inside themselves a personally constructed and unique version of the entire heritage of the West.” He goes on to lament: “I see within us all (myself included) the replacement of complex inner density with a new kind of self—evolving under the pressure of information overload and the technology of the ‘instantly available’” (quote in

Carr 196). This is a lot to take in and, perhaps, I should have started with this question: How do you react to what Foreman says/laments here?

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