

# Some considerations about the future of reading

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We may well be reading more today than we did in the 1970s or 1980s [...]. But it's a different kind of reading, and behind it lies a different kind of thinking—perhaps even a new sense of the self.

Maryanne Wolf

Reading seems so natural to us adults that we tend to forget how long it took us to master that activity. We also tend to believe that reading has always been the same and follows the same pattern independently of the culture, the objectives of the reader, the nature of the text and the extent to which different mediums allow certain modes of reading and discourage others. As a consequence, in a time of rapid technological change, there is a lot of anxiety in the media about a possible decline in the ability to read. In this paper, I will try to put those claims in perspective and I will make the case that we are engaged in a global shift from immersive to *ergative* reading.

## **Some historical background**

Various transformations of the act of reading that we are witnessing today have been under way for several centuries. One of the most evident is the increased

legitimization of an *extensive* form of reading as a complement to the traditional *intensive* reading. I shall first consider this dichotomy before addressing other aspects.

In the past, reading was mostly done vocally: "[In ancient Greece] silent reading remained a marginal phenomenon, practised by professionals of the written word [...]. For the average reader the normal manner of reading continued to be reading aloud, as if the original reason for Greek writing, which was to produce sound, not to represent it, could not be eliminated" (Svenbro, 62-63). The same situation prevailed in Rome, where most reading was done aloud by slaves. This continued during the medieval era, as is attested by the fact that in around the twelfth century, monasteries found it necessary to pass rules enjoining monks to read silently.

The very slow shift from reading aloud to silent reading was made possible by the gradual refinement of the layout of text and the adoption of a tabular format. First came the replacement of the scroll by the codex, which gave readers more control over their activity. According to Saenger (1993) and Parkes (1997), another crucial step was made with the introduction of a space between words around the eighth century. Until then, copyists wrote the words in a continuous sequence or "scriptio continua", which was the norm in Roman manuscripts. The adoption of embryonic forms of punctuation also helped a great deal, as the reader was thus able to use visual clues in order to apprehend the logical structure of the text. With the invention of the printing press, these refinements became standard, along with title of the book on the cover page, the division of the text into paragraphs and chapters, and the index and table of contents. All of these innovations increased notably the tabular aspect of the book (Vandendorpe, 2009, p. 28-39).

Beginning at the end of the sixteenth century, however, the rise of the novel gave momentum to the *linear* reading of books — *linear* here meaning that the reader absorbs the text in a sequential manner, word after word and sentence after sentence, with no incentive to roam through it in a tabular fashion since that would destroy the suspense of the narrative. This form of reading became progressively the dominant model, and triumphed in the nineteenth century. Since then, the novel has become the prototypical model of the book, and the activity of reading is generally equated with "reading a novel" and thus seen as an act of immersion in a book that requires to be read in a linear mode from cover to cover

### **Gutenberg anxiety**

Today, things are changing fast due to the new reading environment created by the arrival of the digital age. Readers have a virtually infinite number of accessible,

searchable, navigable, and shareable texts at their disposal. As a result, we are witnessing a revolution in reading. And this revolution is even more important than the invention of the printing press some five centuries ago, or the replacement of the scroll by the codex around the second century.

The eventual replacement of the book by hypertext, first announced by the visionary Ted Nelson (1974), was put into literary practice with the CD-ROM *Afternoon* by Michael Joyce (1987) which led scholars to explore the possibilities offered by the emergent "writing space" (Bolter, 1991; Landow, 1992). Soon it appeared that the "end of books" was an imminent reality (Coover, 1992). Ivan Illich, a keen observer of social realities and well acquainted with the history of reading in medieval times, recognized that the era of the book as the most powerful symbol was over: "The book has now ceased to be the root-metaphor of the age; the screen has taken its place" (1993: 3). The same observation has been made by Sven Birkerts' nostalgic *Gutenberg Elegies* (1994), and numerous scholarly books or articles (Aarseth 1997; Bénard 1996; Douglas 2000; Nunberg 1996).

With a massive population of all ages shifting from print to the screen, we are now better able to observe the changes in the way users react to and think about this new reading environment. The screen has still certainly many drawbacks, notably the excessive brilliance of the backlit monitor, which is tiresome for the eyes, the poor portability of the standard computer, and the design of the browser whose scrollbar does not allow readers, in the case of a very long "page", to precisely mark the place at which they stop reading. As a consequence, when they are in front of a computer, people will engage in various kinds of reading, but it is unlikely that they will immerse themselves in the reading of a long novel. It is thus not surprising that the novel, which flourished in the printed world, has not yet accomplished its migration toward the screen, while other media like the newspaper and the magazine have successfully morphed into digital format. However, even this migration is problematic as the reading mode required by the novel is quite opposite to that of reading onscreen. The realist novel, linked by Roman Jakobson to metonymy, favours a very coherent set of thoughts that are centred on a finite set of events and characters. Meanwhile, the screen invites readers to a centrifugal quest for signs, taking them ever further away from their initial query.

Having developed skimming strategies suited to the speed of visual perception and the fluidity of the new medium, readers want as much control as possible over their reading and relish the ability to move through texts as they please. The discrete nature of the written word that the reader is free to access when suitable has been so enthusiastically adopted by users that it is tending to displace the long prevalence of verbal communication, as is exemplified by the rise of SMS and Twitter: according to a Nielsen survey cited by Katie Hafner in 2009, the American

teenager reads or writes an average of eighty SMS per day.

The magnitude of this revolution is understandably a cause for anxiety. Just as the ancient oral culture felt threatened by the invention of writing (as is exemplified by Plato's dialogue of *Phaedrus* in which Socrates mocks the use of books), many people today are uneasy about the possible impact on our cognitive abilities of what they consider to be a superficial way of reading; moreover, they wonder quite legitimately if our civilization is not at risk of losing some essential skills that come with the reading of books. As Maryanne Wolf asks in her book on the science of the reading brain: "What would be lost to us if we replaced the skills honed by the reading brain with those now being formed in our new generation of 'digital natives,' who sit and read transfixed before a screen?" (2007 : 221)

This anxiety is all the more justified as changes in reading habits begin to be documented by serious studies. In the USA, for example, the National Endowment for the Arts (NEA) published a report entitled *To Read or Not To Read: A Question of National Consequence* (2007), showing that "Nearly half of all Americans ages 18 to 24 read no books for pleasure", and that "teens and young adults read less often and for shorter amounts of time compared with other age groups and with Americans of previous years". Also, quite predictably, "reading scores continue to worsen, especially among teenagers and young males".

This data found a loud echo in the subjective impressions of journalists, notably Nicholas Carr (2008). In a 2008 article entitled "Is Google making us stupid?", the professional cyber-skeptic laments the fact that he is no longer able to do deep reading as he used to: "Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread, begin looking for something else to do. I feel as if I'm always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle." When he finds that the same feeling was shared by other people, Carr arrives at the conclusion that "[t]he more they use the Web, the more they have to fight to stay focused on long pieces of writing".

This article provoked a lot of reactions, leading Bernard Lunn in 2009 to characterize the digital world as a process leading to "bits of destruction." In a long and well-researched 2008 article, Christine Rosen launched a sweeping attack against "digital literacy" and its advocates' aim of "replacing, rather than supplementing, print literacy". Invoking Jakob Nielsen for whom "reading is not even the right word" (qtd in Rosen) to describe the activity people do on screen, Rosen maintains that the paramount form of reading is the reading of novels and compares quite well certain aspects of the screen versus the book: "screen reading [...] encourages a different kind of self-conception, one based on interaction and dependent on the feedback of others. It rewards participation and performance, not

contemplation.” She also defends strongly the somewhat “passive” status of the reader in the traditional experience of reading a book:

You enter the author’s world on his terms, and in so doing get away from yourself. Yes, you are powerless to change the narrative or the characters, but you become more open to the experiences of others and, importantly, open to the notion that you are not always in control. In the process, you might even become more attuned to the complexities of family life, the vicissitudes of social institutions, and the lasting truths of human nature. The screen, by contrast, tends in the opposite direction. Instead of a reader, you become a user; instead of submitting to an author, you become the master.

I shall come back later on the figure of the author, so important in Rosen’s position, which echoes the way Jane Austen extolls the virtues of this literary genre “in which the greatest powers of the mind are displayed, in which the most thorough knowledge of human nature, the happiest delineation of its varieties, the liveliest effusions of wit and humour, are conveyed to the world in the best chosen language” (1880 : 22).

Most people will probably admit that the important difference between reading a book and reading onscreen consists in the depth of insight and exploration of consciousness that the reader of a novel is invited to do. There is no doubt that the reading of novels can provide valuable vicarious experiences and help develop the reader’s sense of self. Read over many hours, days or even weeks, the novel creates for the reader a universe in which he or she can delve at length and establish a kind of resonance or echo chamber between the inner self and the heroes. As a consequence, a novel can wield an enormous power of psychological change: quotations abound of people whose lives have been changed by reading a novel. For example, Fidel Castro acknowledges his debt toward “many French authors who’ve been decisive in [his] intellectual development and helped [him] understand the world and human passions”. Notable among Castro’s favourite authors is Victor Hugo, whose book *Les Misérables* Castro read when he was still a teenager (508). Even at the age of eighty, the anthropologist René Girard confessed that he always had the impression, when he began to read a book, that it would change his entire life (2004: 44). In a very insightful essay entitled *On Reading*, Proust writes: “There are perhaps no days of our childhood we lived so fully as those [...] we spent with a favorite book” (qtd. in Wolf 6). Proust contrasts the subtle alchemy that takes place in the conscience of the reader with the superficiality of conversation.

In her book based on Proust’s seminal observations, the cognitive neuroscientist

Maryanne Wolf reminds us that “[w]hile reading, we can leave our own consciousness, and pass over into the consciousness of another person, another age, another culture” (2007: 7). Rosen is thus certainly right in saying that “[f]or centuries, print literacy has been one of the building blocks in the formation of the modern sense of self.” In fact, the history of the novel shows a growing tendency toward a narrative written in the first person and describing the most intimate thoughts of the narrator, as have established works by Eric Auerbach (1953) and David Lodge (2002). For the British neuroscientist Susan Greenfield, the reading of novels is even to be linked to the historical rise of individual consciousness, since the history of the novel “reflects a growing trend towards a first-person, subjective view” (2008: 124). Readers of James Joyce, Marcel Proust, or Virginia Woolf will easily agree. However, this trend is not purely literary, but the result of a combination of factors; it is rooted in the fundamental thirst of the human brain for empathy, as is suggested by Jeremy Rifkin in *The Empathic Civilization* (2009).

In addition to its effects on consciousness, the reading of complex literary novels could also develop the capacity of the brain to link many pieces of information together and to make insightful inferences. This hypothesis is explored by a growing number of literary scholars who study the underlying mental processes activated when a person reads novels that play on the “ability to interpret another person’s mental state and to pinpoint the source of a particular piece of information in order to assess its validity” (Cohen), as it is notably the case in Jane Austen’s novels, where the main characters are frequently victims of mistaken interpretations.

### **In defense of the screen and of ergative reading**

I easily agree that the novel still has an important role to play, particularly for developing cognitive skills, nurturing a sense of self in children, and for helping communities who have historically been marginalized to share memories. For many people, reading a novel is also a very efficient way of feeling that one is part of a cultural trend, although this activity is now competing with TV series that can mobilize the readers’ imagination during a long period of time.

That being said, reading novels should not be imbued with virtues it does not actually possess. In fact, immersive reading is not always better than other forms of reading. Many writers in the past have criticized the compulsive reading of popular novels. According to the diagnosis provided by Miguel de Cervantes in the first pages of *Don Quixote*, written in 1605, reading tales of chivalry had caused his hero

to lose his mind:

[H]e so bewildered himself in this kind of study, that he passed the nights in reading from sunset to sunrise, and the days from sunrise to sunset: and thus, through little sleep and much reading, his brain was dried up in such a manner, that he came at last to lose his wits. His imagination was full of all that he read in his books, to wit, enchantments, battles, single combats, challenges, wounds, courtships, amours, tempests, and impossible absurdities. (Translation by Charles Jarvis, 1853, p. 69).

Echoing Cervantes' statement, Gustave Flaubert presented Madame Bovary as the unfortunate victim of a romantic ideal of love inspired by the uncritical reading of too many novels. Before him, Jane Austen had also portrayed a heroine whose judgment had become twisted by reading too many gothic novels.

Indeed, the reading of a novel is a pastime often undertaken purely for pleasure—one that does not necessarily involve high intellectual functions. According to McLuhan, "[t]he mere fact of reading is itself a lulling and semi-hypnotic experience" (1970: 178). This statement is not a gratuitous provocation. Actually, the quasi-mechanical production of meaning made possible by the perfectly readable text produces a kind of hypnotic pleasure, which is all the more pervasive when the intellectual operations required by the text are more routine (see *From Papyrus to hypertext*, chapter 24). This is essentially the case with what is called a "page-turner", in which a reader can become engrossed to the point of completely losing the sense of time and even the sense of self. The same effect may be produced by the repetitive reading of a sacred book, which tends to satisfy a reader's spiritual quest by the reactivation of routine patterns of thinking. In contrast, the diffracted mode of reading on the web is more akin to a secular quest for knowledge and a better understanding of the world.

Actually, attention is at its best when readers do not content themselves with understanding the text but also evaluate the quality and relevance of what they are reading. Some writers have acknowledged their preference for this mode of active reading. For example, Roland Barthes describes the paradox of the temptation to stop reading at precisely the moment when a book interests him the most: "I do not read much, either because the book bores me, and at that moment, I drop it, or because it excites me, and at that moment, I always want to look up to continue with my thoughts in my own way. Which makes me quite a bad reader in quantitative terms" (1995: 345). Meandering and a state of floating attention were also Montaigne's preferred mode: "There I can turn over the leaves of this book or that, a bit at a time without order or design. Sometimes my mind wanders off, at others I walk to and fro, noting down and dictating these whims of mine" (382).

Jean-Jacques Rousseau describes in his *Confessions* the anguish he suffered in his youth:

The false idea which I entertained of things caused me to believe that, in order to read a book with profit, it was necessary to possess all the preliminary knowledge which it presupposed. I had no suspicion that very frequently the author himself did not possess it, and he extracted it from other books as he required it. Possessed by this foolish idea, I was detained every moment, and obliged to run incessantly from one book to another: sometimes, before I had reached the tenth page of the work I wanted to study, I would have been obliged to exhaust the contents of whole libraries. (VI; 1945, 242).

This is precisely the kind of reading that is facilitated in the computer environment thanks to hyperlinks that allow the reader to jump from one piece of information to another. As we can see, Rousseau was a hypertext reader well before the invention of the computer. In fact, as we shall see below, this kind of reading has always been characteristic of the scholarly mode of reading.

At the same time, hypertext makes reading dependent on the ability of the reader to build a relevant context, since each web page is an atoll of meaning in an ocean of words. Digital readers, used to choosing their own path of reading and surfing from one web page to another, develop a set of cognitive abilities that make them very active and less willing to abandon their imagination to the control of a novelist. I propose to call this mode of reading “ergative reading”, which means reading with the purpose of doing something, either producing a new text (commenting, discussing, refuting) or simply leaving a trace of one’s own activity (underlining or highlighting a sentence, dog-earring a page). By using this neologism derived from the Greek word “ergon” (*work*), I follow the lead of Espen Aarseth who characterized hypertext literature as being essentially oriented towards asking the user to undertake a “work of physical construction” (1997: 1).

The appearance of ergative reading may be traced back to the library of Alexandria where grammarians like Eratosthenes established editions of literary masterworks through careful comparison of various versions and filled the margins with glosses explaining obscure words or scholia, providing context or elucidating problematic paragraphs. This philological endeavor became more important with the search for the true meaning of conflicting sacred writings. In the thirteenth century, the invention of the index gave an editorial advantage to the Parisian scriptoria that mastered this new tool (House, 1992). Today, instruments once reserved for a small elite group of scholars are common. These tools help to make ergative reading the default mode, replacing the immersive reading of novels that had

become paramount with the advent of the printing press. As a consequence of this paradigm shift, we are witnessing the disappearance of the cultural imperative that saw the book as a kind of sacred entity whose content should be read from the first to the last page.

In fact, the authority of the book had already begun to fade from our cultural horizon in the 1960s, with theories of writing and reading stressing the subjective experience of the reader as theorized by Barthes and Derrida: “[T]he challenge of the literary work (of literature as a piece of work) is to make the reader no longer a consumer but a producer of the text” (Barthes, 1970: 10. Our translation).

With the advent of the computer screen, all users have at their disposition various tools allowing and enriching the ergative reading experience. These tools consist at the most basic level of a list of bookmarks. The crude list of the early days of the web has already been greatly enhanced with new pieces of software like *zotero* and *delicious*. In addition of making the user’s bookmarks available on any machine, *delicious* is a social tool that allows users to share bookmarks and tags with others and to search through the bookmarks of fellow users who share the same interests.

Ergative reading is entirely driven by the interests of the user. Thanks to search engines, a considerable amount of knowledge is available to everyone, making it possible to find an answer to almost any question. Huge progress has already been made with the new tools Google has added to its search engine, such as the Wonder Wheel, which provides a visual representation of the various fields connected to the search term. Even more useful is the Timeline, which represents on a line a graph quantifying the occurrences of the search word across time. For example, entering “Hugo” in this search window will display a chronological list of the web pages related to the main events in Victor Hugo’s life.

The combination of a global network and computer technology has produced, in the span of one and a half decades, the most extraordinary democratization of knowledge ever imagined. At the dawn of the personal computer, many expressed the fear that this technology would be reserved for a small fraction of the global population and that it would increase the gap between rich and poor nations. As a matter of fact, those dire predictions have not materialized. The price of chips and memory has fallen continuously, enabling the production of cheap laptops and even promising a tablet PC for less than 100\$ in 2012, according to the One Laptop Per Child project ([OLPC](http://www.olpc.org/)). More importantly, the Internet is rapidly becoming a basic component of any economy and a necessity of life, almost on the same level as electricity, to the point that it has come under the governance of a special body of the UN, the Internet Governance Forum, or IGF (<http://www.intgovforum.org/cms/>). This group oversees issues of consumer protection and universal access. As a result, the web is today available in regions

where electricity was not even common twenty years ago, giving access to a wealth of free educational resources and to more than five thousand scientific journals in Open Access listed in the Directory of Open Access Journals, or DOAJ (<http://www.doaj.org>). The increasing availability of the Internet has also led to the fabulous growth of Wikipedia, whose millions of articles are written collaboratively by people from a wide diversity of backgrounds. These authors actively collect data or read books in order to contribute to an article on their preferred topic or on a meaningful event related to their own culture.

Ergative reading is also implied by the emailing of a web page to friends, by referring to it in a forum, or writing about it in a blog. In many cases, readers are thus actively sharing their readings, voicing their reactions and expressing their ideas in writing; in doing this, they are adopting a mode of active and critical reading that was until recently restricted to writers, historians, or scholars in general. As reading is no longer separated from writing, the combination of reading/writing is sometimes called "wreading" and the reader a "wreader" (Allen). This mode of reading/writing is so exciting for the mind that many readers are turning away from novels and prefer to augment their comprehension of the world and deepen their sense of consciousness by participating in blogs or by writing down their own reactions to an event or a policy issue.

Scholars have been the first to adopt these new tools and are exploring the impact those tools will have not only on research and the way to conduct it in a collaborative fashion, but also on the very questions that may be asked in their field of study. Many would clearly enjoy the ability to hyperlink every web page, to annotate and highlight passages — as recommended by Kevin Kelly (2006). Indeed, the web would be a richer environment and would open new perspectives of knowledge if we could establish relationships between the millions of books in the Universal Library, linking all the texts related to a same myth, a same geographical location, historical event, or proper name, and so on.

With the development of ergative reading, the computer is furthering a revolution that began five thousand years ago with the invention of writing and then gained major speed with the invention of the printing press. Because reading is one of the most important ways for the mind to decode and interpret exterior signs, the reader tends to adopt the best technology available. With its ubiquity, fluidity, full indexing and interactivity, the digital text is the best tool to achieve a state of collective intelligence in which all humans can share the trove of accumulated culture and interpret it by expressing their own voices.

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