1. A COST Action

More than a year ago in November I was looking for a project I could join and I found a COST “action” called “Evolution of reading in the age of digitisation”. According to their official website, COST is the longest-running European framework which supports trans-national cooperation among specialists across Europe. COST was founded in 1971, and ever since then it has been contributing to narrowing the gap between science, policy makers and society at large. The stated goal of our E-READ action is “to improve scientific understanding of the implications of digitization, hence helping individuals, disciplines, societies and sectors across Europe to cope optimally with the effects”. Therefore, the purpose of the project is re-thinking the entire concept of reading and the factors that influence it – from texts and platforms used to technologies enabling reading, including printed books, e-readers and computers. E-READ will also deal with the various factors that triggered the transition to reading in the digital media.

At the meeting in Ljubljana, which took place in April 2015, the provisos that the medium impacts the understanding of long texts, and that some empirical studies have shown that certain properties of tablet computers have a negative impact on the emotional aspect of reading were thrown into question. My enthusiasm for this state of the art approach to reading and books in a present which is replete with digital devices and applications was instantaneous. “Of course”, I thought to myself, “I’ll be engaged in research that will make me and a lot of other people get to grips with a process which will completely change our reading habits. We will look into the history of print reading and into the present of e-reading in order to account for what is being lost, what is being gained, what should be preserved, and what should be adapted”.

I have always been fascinated with the process of reading, and I have given a lot of thought to the self-conscious approach to writing itself as reading in the fiction of Poe, Henry James, Virginia Woolf, Joyce, Borges, Lodge, Eco, and so many others, and in the poetry of Emily Dickinson, and, as I have recently discovered, Edward Hirsch’s writing on poetry. In the essay “On Books and Reading”, published in Issue no. 7/2015 of the Journal of Romanian Literary Studies, I argued that the
activity of reading epitomises our condition of being modern, that we literally read with our bodies and that books on paper have bodies of their own. While reading, our body of flesh and the book’s body of paper interact and engage in a rhythmic choreography. So important does the reader become that the text itself turns into the reader’s drama.

The thought I gave it reinforced my hunch that the best writers are at the same time voracious readers. For them, writing is reading in the first place, and their narrators and characters often dramatize this stance for their readers. In the last five hundred years or so reading has been a crucial activity in which virtually everybody is invited to join.

2. The future of print

The future of print is contentious. Is it dying, is it going to die or is it dead already? It may be so for the most zealous e-reading supporters. However, for those of a more temperate mind it will probably last, though it may lose some ground.

The issue in itself is a sign of concern. After all, the invention of print marked a cultural revolution, a new age. According to McLuhan, movable type resulted in the commodification of literature and at the same time in the emergence of two entities: the “author” and the “public”.

However, as early as the 1960s McLuhan argued that humankind was already in a post-Gutenberg age. Indeed, the non-linearity, connectedness and flexibility of the new media, where textuality turns into hypertextuality and authorship is dispersed, blurs our perceptions of “author” and “public”.

In the last decade, e-readers such as the Kindle and the Nook have become less expensive and more accessible to the large public, and books have been digitised. Tons of books can be downloaded and read in an electronic format, and e-readers are portable and light. Have e-books become a threat to print?

Paul Balogh, who together with Cristian Dinu founded the ReadForward project, argues that in 2014 people can grasp Plato’s Dialogues in a digitised format better than they could grasp them in print. “Why is that so?”, Balogh wonders, “Because you can give them references, you can show them, for instance, the places where he [Plato] used to walk, you can tell them who Socrates was, if they don’t know it, or you can tell them who Socrates’s interlocutor was” (Balogh 2013)\(^1\). What Balogh does when he accounts for these fantastic possibilities offered by e-books is to suggest that they actually become reading maps. Clicking on a character, the reader can see the character’s interactions with other characters, clicking on a place, one can find information on it, one can access its map.

Cristian Dinu explains that e-books can be far more interactive than books on paper. The most challenging aspect of this interactivity is that they can “know” and “locate” their readers. Being so sensitive and responsive to their readers, the e-book can always undergo a process of automorphosis. Therefore, it is no longer an object of fixity and stability, but one of metamorphic fluidity. Compared to the charting capacities of e-books, printed books are far less resourceful.

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\(^1\) All quotes from Balogh’s article are my translation.
Balogh illustrates the idea with Penguin’s recent endeavours. In the last two years or so Penguin has designed applications which aim to create a broad canvas, a context where the text belongs. A telling example is the application they did for Jack Kerouack’s *On the Road*, which gives details about themes in the book, about Kerouack’s biography, about the Beat Generation, and which maps out the places where Kerouack travelled. Likewise, Fast Forward experimented with F. Scott Fitzgerald’s *The Great Gatsby*, where, Balogh states:

> We aimed to bring the beauty of a printed illustrated book in a pure digital format. We think we succeeded to create the best reading experience anyone can have when it comes to this Fitzgerald work (Kalder 2013).

Balogh contemplates a future of less than ten years when printed books will become like the vinyl, i.e. stuff to be collected for its added value. The only books that will stand chances to survive, in Balogh’s opinion, are “the beautiful books, those which give another kind of experience” (Balogh 2013).

In a lecture titled “Vegetal and Mineral Memory: the Future of Books” delivered in 2003, which surely informs his *Books as Vegetal Memory*, Eco declared:

> I belong to the people who still believe that printed books have a future and that all fears à propos of their disappearance are only the last example of other fears, or of milleniaristic terrors about the end of something, the world included (Eco 2003).

### 3. The pleasure of reading

Borges imagined Paradise as a kind of library. In *Declaration of Love* Gabriel Liiceanu speaks about our first encounter with a book as a dance with it. The scene is an echo of the ballroom scene in Tolstoy’s *War and Peace* when Bolkonski singles out Natasha to dance with of all the women in the room.

Like the women in the ballroom waiting to be discovered, books stand “waiting in a line along the wall. The eyes glance at them distracted, without making any decision. Then the reaching hand takes a book out of the shelf, opening it. The dance may begin. The dance with a book” (Liiceanu 2001: 169) [my translation]. Liiceanu’s diction is designedly erotic. It implies that our engagement with books is a pleasure we take in reading, which is very close to falling in love, dancing to the rhythm of love and making love. The book itself is a body to be glanced at, fancied, reached for, touched and caressed.

Our engagement with printed books is physical. If we consider the fact that our most entrancing reading experiences occur in moments of solitude, then our relationship with books is an intimate affair. We read when we are alone, the book keeps company and it speaks to us. We lie with it in bed or under the shade of a tree, we bookmark it with our fingers, we fall asleep with a book on our lap or chest, we take it in the tub.

### 4. E-Reading – pleasure or “haptic dissonance”?

Can e-reading engage us in a similar physical pleasure? It seems that we live in an age where everything is not only digitised but also going fast. The pleasure of taking one’s time to eat for the sake of tasting food and enjoying company is
obsolete. In order to be efficient, the individual eats fast food. Fast food is not just an eating habit, but also a life style. So is coffee drinking. The manual labour of grinding coffee, which fills the air with the rich flavour of freshly ground coffee beans, followed by the slow process of boiling the grounds in a pot and pouring it into the cups, which is a ceremony to be enjoyed through all the senses, has been replaced by the convenient and fast automatic espresso machines, which render ritual redundant and reduce pleasure to a minimum. Coffee drinking has become a mere necessity, which is satisfied quickly and efficiently.

Likewise, reading is becoming less and less of a pleasure to be cherished through the senses. In *Books as Vegetal Memory* Umberto Eco argues that reading is a tactile experience in which bodies suggest ideas, and the sensation of our fingers touching the book stirs deep emotions in us.

Besides the touch, there is also the smell. Denis Brown, a contemporary Irish calligrapher remembers his initiation into the art of calligraphy especially by the smell of the manuscript of *The Book of Kells*:

When I began learning calligraphy as a young schoolboy growing up in Dublin, I was fortunate to have one of the world's greatest manuscripts, *The Book of Kells*, at a thirty minutes bicycle ride from my home.

At that time, they turned a page every day and entrance was free. I recall spending many Saturdays making bicycle pilgrimages to the city centre, to examine the pages on display in the Old Library in Trinity College, with its magnificent aisles of old books stacked from floor to the high arched timber ceiling, and pungently exuding sweet aromas of leather dressing. (An intensity of smell and anticipation I could compare to my first visit to an Amsterdam coffee shop, wafting its own exotic and narcotic aromas!). Following that cultural intoxication in Trinity College I would continue my day in the city with more normal schoolboy activities, such as wasting money in arcade halls of video games! (Brown 2014).

Brown suggests that his frequent visits to the Old Library in Trinity College acquired a significance which turned them into pilgrimages, i.e. journeys to a place that in his mind had become sacred. As such, they had an intoxicating, i.e. inescapably compelling effect, which is seen in contrast to more mundane activities. There is no doubt that the strongest sensory stimulus was the smell of the manuscript, whose olfactory addictive impact is likened to that of coffee. The “pungently exuding sweet aromas of leather dressing” are not only “an intensity of smell” but also an “anticipation”, which is a subtle indication of the role of smell in the process of reading. Smell is not a mere tingling of the senses, but also a stage in learning and making sense.

However, Brown translates the quality of the old manuscript images into digital images, and his works combine the old art of calligraphy with the new digital techniques and design. A telling example is his “Pangur Bán”, which draws on the story of a ninth century Irish monk who praises his cat Pangur Bán for its swiftness at hunting mice, which he compares with his own scholarly work of hunting words and wisdom.
Apart from touch and smell, there is also a sense of size, shape, weight and length, in other words a sense of the book’s physical presence that readers associate with their reading experience, and which gives them pleasure. Ferris Jabr, a specialist in neuroscience and psychology, looks into the reading brain in the digital age. In his article published in April 2013, he points out that these characteristics of printed books are engrained expectations, which people associate with the pleasure they take in reading. Jabr contends:

In contrast, although a digital text has a length – which is sometimes represented with a scroll or progress bar – it has no obvious shape or thickness. An e-reader always weighs the same, regardless of whether you are reading Proust's
magnum opus or one of Hemingway’s short stories. Some researchers have found that these discrepancies create enough “haptic dissonance” to dissuade some people from using e-readers. People expect books to look, feel and even smell a certain way; when they do not, reading sometimes becomes less enjoyable or even unpleasant (Jabr 2013a).

At the same time, Jabr admits that the convenience of a slim and portable e-reader may win the case for the digital device. The very concept of “haptic dissonance” implies that accepting or rejecting the idea of using an e-reader depends on the setting and purpose of reading. Jabr also argues that the people’s initial resistance to e-readers may change in the future, “especially if e-readers and tablets allow more sharing and social interaction than they currently do” (Jabr 2013a).

5. “Digital natives, digital immigrants” – a conflict?

In an article published in Scientific American in 2013, Jabr looks into what he calls “one of the most provocative viral YouTube videos in the past two years”, which features a one-year-old girl playing with an iPad, who sweeps and pinches the pages of paper magazines as if they were screens. The father’s “reading” of his daughter’s gesture sheds light on the significance of this transfer: for him, it “is evidence of a generational transition”. Moreover, he argues that “magazines are now useless and impossible to understand, for digital natives” (Jabr 2013b).

The term “digital native” was coined by education consultant Marc Prensky in his 2001 article “Digital Natives, Digital Immigrants”, and it designates the children born and raised in a digital, media-saturated world in the last decade of the 20th century. Although older generations were born in a pre-digital age, they still have to cope with the rapidly advancing digital technologies, but since they are not “natives” they rather feel like “immigrants” in this brave new world.

Alternatively, the children born between the early 1980s and 2000 are called “Millennials” or “Generation Y”, while those born in the mid to late 1990s or even mid-2000s to the present day are “Generation Z”.

Since successive generations are born in a world in which digital technology changes their mind cast and social habits, the main problem of the present and future of humankind is how fast and how efficiently the various generations can adapt to them and how they can share an increasingly digitalised world without clashing.

6. How deep is our E-Reading? How serious are its adverse effects?

“How deep is our E-Reading? How serious are its adverse effects?”

Public Libraries Online”, a publication of the Public Library Association, announced on the 24th of February 2014 that “we’re in the middle of an e-reading craze. Libraries are dashing around to add more digital titles to their catalogues.

\footnote{haptic, also haptical (adj.) – Digital Technology of or relating to tactile sensations and the sense of touch as a method of interacting with computers and electronic devices (http://dictionary.reference.com/browse/haptic?c-t) Jabr references this source for “haptic dissonance”: “there is evidence that the different haptics of a physical book play an important role in e-book acceptance, especially in leisure settings. Therefore, the construct of haptic dissonance is derived from a theoretical basis – conceptualized and hypothesized as being an important antecedent of ebook acceptance” (http://aisel.aisnet.org/ecis2011/141/).}
Libraries are lending out e-readers and even opening bookless\(^3\) branches. The same publication admits that e-reading offers numerous benefits for readers and for the environment. Nonetheless, the craze and enthusiasm stirred by their novelty may be the result of hasty judgement. Therefore, Chrystiana Hunter, the author of the article on the physical effects of e-reading urges us to “slow down a minute and consider possible adverse effects” (Hunter 2014).

One such effect is that screen reading takes more mental energy, which means it leaves less for content retention. The increased mental energy required by e-reading in the 21st century reminds me of the mental energy implied by living in the metropolis in the early 20th. Thus, in “The Metropolis and Mental Life”, Georg Simmel argued in the early years of the previous century:

> The psychological basis of the metropolitan type consists in the intensification of nervous stimulation which results from the swift and uninterrupted change of outer and inner stimuli (Simmel 1969: 48).

Simmel contrasted the lasting impressions that rural life extracts from the individual with “the rapid crowding of changing images, the sharp discontinuity in the grasp of a single glance, and the unexpectedness of onrushing impressions,” which he deemed to be “the psychological conditions which the metropolis creates” (Simmel 1969: 48). Extrapolating Simmel’s findings to reading paper books versus screen reading, the similitudes become apparent. Hunter argues that the limited perspective on the text offered by the screen, where only a page or two can be “seen”, “is disorienting to the reader”. The digital readout with which most of the e-readers are equipped, and which keeps readers posted of their progress within the book, is not the same as physically holding a book in one’s hands and flipping through individual pages, which, as Hunter points out, “makes the reader feel more grounded to the experience than a simple readout of her progress on the screen” (Hunter 2014). “Grounded” is the opposite of “disoriented”, which means that reading paper books offers a sense of physical orientation and maps out a physical territory. This sense of “groundedness” and “orientation” turns paper book reading into a positive experience. What Hunter adds to it is that feeling grounded also favours memorisation, which is an act of appropriation.

The e-reading maps are virtual, and therefore can only cater for virtual experiences, without any physical grounding. As long as they keep their physical entity, readers will probably need a sense of feeling “grounded” in order to make the most of their reading experience. As long as reading is done for pleasure and the content of books is there to be retained and to be used later, paper books will guarantee that.

Ferris Jabr argues that although e-readers and tablets are becoming more popular as digital technologies improve, “research suggests that reading on paper still boasts unique advantages” (Jabr 2013a). In present-day jargon, texts are there

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\(^3\) The San Antonio – Texas Library, opened in 2013, is the first completely bookless library in the U. S.: “it looks a lot like an Apple store: Rows of glossy iMacs beckon, iPads mounted on a tangerine-colored bar invite readers. And hundreds of other tablets stand ready for checkout to anyone with a borrowing card” (http://www.usatoday.com/story/money/business/2014/01/04/san-antonio-bookless-public-library/4310655/).
“to navigate”, which before being a computerise word may be a most suggestive term to suggest not only the readers’ journey through the text but also their sense of orientation. Speaking about “navigating textual landscapes”, Jabr argues that:

In most cases, paper books have more obvious topography than onscreen text. An open paperback presents a reader with two clearly defined domains – the left and right pages – and a total of eight corners with which to orient oneself. A reader can focus on a single page of a paper book without losing sight of the whole text: one can see where the book begins and ends and where one page is in relation to those borders. One can even feel the thickness of the pages read in one hand and pages to be read in the other. Turning the pages of a paper book is like leaving one footprint after another on the trail – there’s a rhythm to it and a visible record of how far one has travelled. All these features not only make text in a paper book easily navigable, they also make it easier to form a coherent mental map of the text (Jabr 2013a).

Jabr supports his argument with studies which clearly show that, because screens offer a limiting navigability of texts, they actually impair comprehension. One of the studies referenced by Jabr was carried by Anne Mangen of the University of Stavanger in Norway, who initiated the COST E-Reading action. Mangen and her colleagues undertook a reading experiment in which 72 10th-grade students of similar reading ability were asked to study one narrative and one expository text, each about 1,500 words in length. Half the students read the texts on paper and half read them in .pdf files on computers with 15-inch LCD monitors. Following their reading, students completed reading-comprehension tests consisting of multiple-choice and short-answer questions, during which they had access to the texts. Mangen’s team found that students who read the texts on computers performed a little worse than students who read on paper, which is probably because it was more difficult for students to “navigate” the .pdf files for particular information. In other words, students had difficulties in finding their way through the digital files. While the .pdf files could be clicked through or scrolled only one section at a time, the paper documents could be held in the hands and quickly leafed through. Mangen concluded that “the ease with which you can find out the beginning, end and everything in between and the constant connection to your path, your progress in the text, might be some way of making it less taxing cognitively, so you have more free capacity for comprehension” (Jabr 2013a).

According to Jabr, there are two more aspects of navigating texts for which screen devices fail to cater, and those are serendipity and a sense of control. Jabr references readers’ reports which show that while reading, they like to flip backwards and forwards at will, either because they want to connect to a previous image, detail, phrase or sentence, or because they fancy anticipation. As far as control is concerned, readers feel like highlighting certain passages or responding to them by writing marginal notes.

There is one more considerable adverse effect of digital reading, which doctors call “digital eye strain”. A report by ABC news showed that both adults and children spending too much time on digital devices develop headaches, blurry vision, difficulty focusing, dry and irritated eyes, neck and shoulder pain. That the blue light emitted by digital devices may eventually lead to serious long-term damage to our eyes still awaits the specialists’ confirmation, but the fact is that
anybody who is exposed to it on a daily basis complains of eye strain. The most serious consequence of a long and frequent exposure to the blue light is permanent eye damage through an age-related macular degeneration leading to vision loss. Therefore, in the light of these adverse effects, e-readers and e-books can only be alternatives of limited convenience and use.

7. The future of (E-)Reading

In his compelling Book Was There, Andrew Piper draws on Gertrude Stein’s words “books were there” to look into the relationship between books and screens, since books got there first. Starting from the proviso that he can imagine a world without books, but not a world without reading, Piper charts the territory of reading as “a vast field of research” (Piper 2012: ix). Seductively and humorously listing the diverse ways in which humans have been reading since immemorial times, “silently, linearly, haphazardly, attentively, distractedly, purposefully, together or alone, with or without pens or pencils” (which, by the way, is a habit through which we bond not just with the text, responding to it in some sort of dialogue, but also with the book as an object, which thereby bears traces of our reading), Piper argues that there are two major benefits derived from reading. One is that reading disciplines our minds, and the other that “it is also one of the most efficient means of mental escape” (Piper 2012: ix).

The great enigma in Piper’s account is that, despite the access researchers have to the people’s reading experiences, we still do not know what it is that people do when they read. If we could do with this age-old enigma, it seems that now we can no longer do without extricating ourselves from the new question of how e-reading devices and applications change our relationship to reading, and therefore thinking.

Umberto Eco, Piper, Balogh, Dinu and others – writers, readers, librarians – are optimistic. Books will be there and people will continue to read. The question is how. Piper predicts that reading paper books and e-reading will coexist. Tackling reading as “pleasure” in “an age of distraction”, Alan Jacobs notices that he has heard talk not just from teenagers and people in their twenties, but also older people in America who “since becoming habituated to online reading and the short bursts of attention it encourages – and demands – simply can’t sit down with a book any more. They fidget; they check their iPhones for email and Twitter updates” (Jacobs 2011: 7). Quoting the statement of one of such people who laments that he misses his “old brain”, Jacobs argues that people who could read can do it again, while those who could not can always learn. The problems raised by Jacobs are not strictly related to e-reading but rather to a larger media environment which is altering our lifestyle, and which includes our reading habits.

In “The rise of e-reading” released in April 2012, Lee Rainie, Kathryn Zickuhr, Kristen Purcell, Mary Madden and Joanna Brenner show that the Americans who are now in the habit of reading digitally read more books in all available formats, which implies, of course, that e-reading boosts reading in general. One of the key findings of their report is that in the U.S. the prevalence of e-book reading is markedly growing, although book readers still prefer printed books. The
authors found that e-books are preferred when speedy access and portability are considered priorities, while printed books are preferred by those who read to their children and who share books with others. In a world where consumerism keeps the economy bouncing, the fact that device owners are more inclined to purchase than to borrow books (in all formats) is a huge upside. Moreover, the interest in reading and the orientation any reader needs are significantly increased and facilitated by the digital technologies available. The report shows that readers start their searches for e-books at online stores.

However, Jabr’s study suggests that even the millennials prefer the printed format when it comes to reading books. Surveys and experiments show that the sensory experiences associated with reading – especially the tactile ones – matter more than we might think. Text on any screen looks a lot more intangible than text on paper, and intangibility is increased by the sense that images on screens are ephemeral.

As far as the future of e-readers is concerned, Jabr sounds reserved, albeit with a dash of hope for improvement:

> When reading a paper book, one can feel the paper and ink and smooth or fold a page with one's fingers; the pages make a distinctive sound when turned; and underlining or highlighting a sentence with ink permanently alters the paper's chemistry. So far, digital texts have not satisfyingly replicated this kind of tactility (although some companies are innovating, at least with keyboards) (Jabr 2013a).

There is no doubt that e-reading is here to stay, therefore it has a future. The question is how both digital natives and immigrants will develop and change their reading strategies in the digital age. Indeed, as Ferris Jabr suggests, it may be more convenient to read long pieces of plain text in print, but “new companies like Atavist offer tablet readers long-form journalism with embedded interactive graphics, maps, timelines, animations and sound tracks” (Jabr 2013a). There are also writers who produce interactive fiction and nonfiction which allows their users to choose what they would like to read, hear and see next. Could that mean that we are on the verge of an age when reading is the future of print, while using the digital media will offer us a new kind of experience, which is not exactly “reading”?

**Bibliography**


Kalder 2013: Daniel Kalder, *Romania’s Read Forward Angles to be “Facebook for Education”*, in
Abstract

This article is the second in a series I am planning to write on reading in the digital age. The first one entitled “On Books and Reading” looked into the evolution of books and paradigms of reading in the last approximately three hundred years. It served as a prelude to an endeavour that aims to capture a very dynamic phenomenon, which is that of reading in the digital age. In November 2014 I joined a COST action whose objective is to assess the impact of digitisation on reading. Since research in this field is underway, both questions and answers are tentative. There are upsides and downsides to reading both in print and on screens. Reading paper books, and since the advent of print, printed books has shaped our reading and even our thinking habits. Nevertheless, e-readers are a recent invention with considerable benefits. The transition from paper book reading to e-reading is double-edged. E-readers and other digital devices are light and portable, but reading on screens may be confusing, disorienting, and it may have a negative impact on cognitive and emotional aspects of reading, which are serious downsides. On the other hand, reports show that owners of digital devices read more in either medium, and it seems that the new products designed especially for digital use are not texts in the traditional sense. It may also be that getting used to and accepting the new digital devices and applications may take some time. Adapting them to our reading habits may also take time. Alternatively, they may change our reading habits dramatically, or the future may be paper for texts and digital for more interactive products.