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About the Horrific Peril of Reading on Digital Devices

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Abstract

Reading on digital devices has become a widely debated issue in mass media and academia. The dawn and consolidation of digital technology have made possible new devices for reading. In the Internet era, reading is not just a matter of books and paper. This loss of exclusiveness has generated different anxieties in many intellectuals, researchers, journalists, editors, and publishers related to the printing environment. An analysis of such uneasiness can provide clues about the hidden interests and misunderstandings implied in their arguments. Revealing anxious claims about digital devices can enlighten us about the multiple factors and interests involved in the act of reading.

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1. Introduction

A quick review of newspaper op-eds or academic papers reveals many anxieties about the introduction of digital technology to the printing environment. By printing environment, we mean all the actors, technologies, and social structures involved in the process of writing, editing, translating, publishing, and promoting the product of Gutenberg's invention: printed letters on paper in a serial process. The concept *printing environment* equals the concept of the *Gutenberg Galaxy* coined by Marshall McLuhan in the 60's. As McLuhan (2012) explains, by the end of the Middle Ages, the serial printing technology had created a full industry, with a full new socioeconomic

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environment for the reading–writing process. The social structure of the Gutenberg Galaxy, quite immune to great turnabouts during the last 500 years, is undergoing a transformation due to the digital revolution and the spread of the Internet all over the world.

The economic wars between publishers and Amazon, the most powerful book distributor on the Internet, exemplifies the changing roles in printing environment. Amazon offers services to publishers that they could hardly have imagined. According to the wish lists and the number of visits to Amazon's website, publishers can know in advance how many books they need to print in order to reach sales expectations. However, Amazon does not provide such services for free: they force publishers to lower prices to increase sales, or demand a higher percentage from each transaction. If publishers do not accept Amazon's requests, the search engine of Amazon's website may leave the books of the rebel publishers out of the main searches made by potential customers, damaging the sales of an actual company. The publisher Hachette and Amazon have just agreed to finish this economic war (<http://nyti.ms/1AuIPXy>).

We will demonstrate that the fears and turbulences generated by the appearance of digital media cause the anxieties of the social actors of the Gutenberg Galaxy. The purpose of this paper is to explain to what extent this challenge and the debate around it are contaminated by unjustified claims about digital technology and the reading process.

2. Anxieties revisited: the moral panic

In Kubrik's *2001: A Space Odyssey*, the appearance of a huge, black, perfect hexaedron in the middle of our ancestors's territory puts them into a frantic state. Later in the movie, one of the apes feels curious about the bones spread all around. He starts hitting the bones with a single bone and creates a tool from a former meaningless object. In one of the most celebrated ellipsis and metaphors in the history of cinema, the bone thrown up to the sky becomes a spaceship while *The Blue Danube Waltz* plays: from the dawn of technology, to technology at its peak.

The first part of Kubrik's film illustrates how the tension between fear and curiosity about technology and environment shapes our capacity to innovate. The anxieties are the result of this antagonism and exert a restraining role over the process of innovation. Nevertheless, many anxieties are not legitimate, just an irrational-apist fear against brand-new discoveries or an ideological construction built up in order to preserve the old status quo: "It has always been so: new technologies are perennially imagined to be not simply the enemy of established systems but in fact a direct threat to the essence of what is to be human. For this reason, declarations of cultural decline always bear complexly submerged ideological motivations." (Fitzpatrick 2012)

The problem lies in the criteria used to identify when a specific technology can generate non-reasonable anxieties. According to Genevieve Bell, director of Intel Corporation's Interaction and Experience Research, the moral panic concept explains illegitimate reactions to technological development (Bell 2011). Any technology is potentially capable of producing such angst when it fulfills the following conditions: first, if it changes our relationship with time; second, if it changes our relationship with space; third, if it changes our relationship with other people. As Bell explains, the moral panic always begins with women and kids: "If you electrify homes you will make women and children vulnerable. Predators will be able to tell if they are home because the light will be on, and you will be able to see them. So electricity is going to make women vulnerable. Oh and children will be visible too and it will be predators, who seem to be lurking everywhere, who will attack." (Bell 2011)

Reading on digital devices accomplishes these conditions. First, we don't need to waste time travelling to a book-shop or library to get anything to read; second, wherever the digital device can access the Internet has become our reading spot, and our personal library can travel with us anywhere; last, reading can become social, not just an isolated act (through blogging, Twittering, annotations and highlights in e-books...).

3. The horrific perils of reading on digital devices

Digital devices can be divided into two main categories. First, we find the devices specifically designed for reading, like Kindle from Amazon, which use electronic ink on their screens. Their capabilities of connecting to the Internet and working online are limited by the speed of their processors and by the fact that electronic ink cannot refresh data on screen as effectively as other technologies like leds or TFT. We will name these devices "electronic

ink devices” or “e-readers”. In the second category, are the rest of the devices used in digital life: tablets, computers, cell phones, televisions... Such devices tend to use TFT or led technology on their screens because of their higher speed of refreshing data on-screen. They are not specifically designed for reading. In fact, their processor's speed allows them to connect to the Internet and many other functions not available on e-readers. We will name these devices “general purpose computer devices”.

Compared to e-readers and the general purpose computer devices, the book stands up with seniority. The main physical feature of a book is that uses bound paper printed with letters. The physicality of a book is explained, in a humorous style but with deep understanding, at <http://bit.ly/1qHlvSe>.

Some authors like Baron (2013) or sources found in <http://bit.ly/1dBCtsw> have designed surveys to obtain data about the preferred reading device of students or common readers. The readers, almost universally, prefer a book over a digital device. After observing the reasons provided by the academic analysis and the answers to the surveys, two categories can be found: the physical and the cognitive advantages of books over digital devices. The first question would be: Why don't digital devices improve the *physical* experience of reading in a book? According to the surveys in Baron (2013):

- It is easier to identify covers on shelves, so it is harder to remember e-books or find them in a digital device.
- It is easier to locate a passage from a book due to visual memory (position on the page, or left/right page).
- It is easier to navigate through a book, by just flipping the pages backward or forward.
- It is easier to be conscious about the pages remaining in a book through plain tactility and weight sensation.
- It is easier to annotate.
- It is impossible to establish an olfactory or tactile relationship with an electronic device.
- It is less harmful for the eyes to read in a book than in a general purpose computer device. There is no difference between an e-reader and a book.
- It is easier to maintain: there is no battery or software updates.

We need to remark that most of these alleged reasons are opinions and preferences, not facts. We will focus on this misunderstanding later. The next question would be: Why don't digital devices improve the *cognitive* experience of reading in a book?

From the physical flaws of digital devices for reading, both readers and many academics conclude that digital devices promote distraction and lack of attention while reading. The devices connected to the Internet interrupt the reader with notifications from friends or work, or seduce him or her with hyperlinks to information related to the reading. There seems to be a general consensus that digital devices connected to the Internet create a new reading culture, built up with short readings in a Twitter style, named *snippet literacy*: "In the memorable words of Joe O'Shea, a newly selected Rhodes scholar "I don't read books per se. I go to Google and I can absorb relevant information quickly. Some of this comes from books. But sitting down and going through a book from cover to cover doesn't make sense. It's not a good use of my time as I can get all the information I need faster through the web" (qtd. in Jacobs, *Pleasure* 72). The "Find" function in online reading has created a new culture of what elsewhere I have called "snippet literacy" (*Always On*, 204–06)." (Baron 2013, 197)

The conclusion is that digital devices are not adequate for long or focused readings because readers cannot prevent from falling into the multiple temptations that digital technology offers.

4. Conclusions: misunderstandings and moral panic dressed in nostalgia

Walter Benjamin, in his acclaimed *The Work of Art in the Age of Mechanical Reproduction*, cites Georges Duhamel: “I can no longer think what I want to think. My thoughts have been replaced by moving images. [...] a pastime for helots, a diversion for uneducated, wretched, worn-out creatures who are consumed by their worries a spectacle which requires no concentration and presupposes no intelligence which kindles no light in the heart and awakens no hope other than the ridiculous one of someday becoming a ‘star’ in Los Angeles.”

We cannot avoid comparing some of the present anxieties about reading on digital devices and the obvious moral panic expressed by Duhamel. The above-cited Fitzpatrick herself published a book debunking the myth that television was harming the novel (Fitzpatrick 2006). McLuhan (2012) himself cites ancient complaints coming from Egyptian priests panicking because they considered that memory would be unnecessary in a world of written

culture. As a brand new technology is born, trumpeters of apocalypse appear. History confirms that these apocalyptic reactions to a new media are inherent to processes of innovation.

Whether we consider the physical or the cognitive disadvantages of digital devices, we find no objective data that justifies such claims. The physical advantages of books over digital devices are defended only by opinions and preferences and the conclusions inferred from them. Saying that it is easier to remember and locate a passage in a book through visual memory than in a digital device makes no sense. There is tool in any digital reading device to highlight a passage and just by clicking on the "Highlights" button you see, at first sight, all the highlights—your own highlights or the highlights of any reader in the world—of an e-book; or you can type the words that you remember and find in milliseconds where they occur; or you can annotate the book without interfering with the reading—the notes are hidden or not, as you wish—. What we infer from "it is easier to locate a passage in a book, or a book itself in a library by its cover because of visual memory" is that we are back to the memory reasons of Egyptian priests cited in McLuhan a few lines above. Saying that "it is easier to find and remember [...]" shows a complete ignorance of the possibilities offered by digital devices.

We claim that the misunderstandings and inabilities to take advantage of e-books and e-readers come from an education and a social environment anchored in the Gutenberg Galaxy. If students have been born and bred in a book culture, with parents that own and collect books, by teachers who do not use any kind of digital technology, and professors who throw a shade of doubt and suspicion over digital technology, it makes sense that students prefer books over e-books.

The cognitive disadvantages and lack of attention necessitate a deeper counterargumentation. First, no device can be blamed for its use. An axe can cut both wood or the head of a friend; atomic energy can produce electricity or devastation; a digital device connected or not to the Internet can create deep reading if the reader is used to it. If a reader needs a long reading session and does not want to be disturbed, he or she can disconnect from the Internet and do not receive personal notifications, or be able to make "distracting searches". The user of a digital device builds up his or her experience, not the device.

Secondly, defendants of the terrible consequences of snippet literacy assume that long and deep reading is the best method to access information and knowledge. Fitzpatrick (2012) explains that: "As Naomi Baron's research demonstrates, there are clear indications that online reading is more associated with multitasking, and it's certainly more associative and nonlinear than the ideal of reading in print, since online readers navigate through links from one text to the next, often finding themselves somewhere down a chain of links without a clear sense of how they got there. Reading online also tends to be a bit more characterized by the *tnesis* that Roland Barthes uses to describe the print reader's ability to skip and skim over passages at will. Of course, Barthes understands this *tnesis* to be one of the hallmarks of the reader's autonomy in consuming a text, a playful mode not at all associated with being the "bad" reader usually described by skipping and skimming."

The linear thinking fruit of Gutenberg Galaxy is being confronted with reading strategies that open the range of creative possibilities through the intuitive associations that hyperlinks allow. Linearity is sometimes necessary, but perhaps is not the way information is processed and knowledge is generated in our minds. Many clues point to serendipia and snippet reading in open communities in real time as a better source of information and knowledge than isolated, long, concentrated efforts in one simple source.

At this point, we return to the metaphor of *2001: A Space Odyssey* and the fear vs. curiosity paradox. At first, we fear and reject innovation; next, we test in a compulsive manner, which leads us to distracting behaviours. Time and experience and a proper education, allow the reasonable and profitable utilization of new technologies. The Internet and e-readers are just newborns in terms of development. We are just starting to understand the deep implications of their adoption in daily life. For this reason, we cannot agree with judgements about technology announcing the apocalypse or making nostalgic arguments about tactility, smell, visual memory, or cognitive lack of attention.

As a final issue, we introduce an idea that could deserve deeper research: many anxieties are consciously or unconsciously made arguments to defend the status quo which is being challenged by the innovation process promoted by new technologies. It would be interesting to research who is standing against whom and which reasons are they using in this ideological combat. Following the example of the war between Amazon and publishers: What interests are behind the media debate about the issue?

Amazon is focusing the discourse on the consumer's benefit (prices are lower for e-books than for books) and authorship independence (Amazon offers editing services for authors and giving a 70% share of the price of a book

to some authors). Our question would be: are publishers afraid of this enormous challenge and have started a public relations campaign to defend their business? Are academics linked or favoured by publishers taking side for the publishers because digital technology is challenging their position in the pyramid of power? In the end, is the e-book public debate just a symptom of a deeper problem and more decisive dispute between a brand-new digital culture challenging the old Gutenberg Galaxy status quo?

In any case, the horrible peril of reading on digital devices is not being aware of the incredible and unexpected possibilities of reading in digital devices.

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