Our Brain and the News

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The Psychophysiological Impact of Journalism

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"Two roads diverged in a wood, and I - I took the one less traveled by, And that has made all the difference."
Robert Frost (1920)

To Journalism lovers and all of those who believe Information and Knowledge can make a better world.

To Nuno, Matilde and Rafael. For always being there. For listening. For believing.

Preface

The first time I read John Hersey's *Hiroshima*, I thought it was an example of everything I wanted to do as a journalist: report, make a difference and tell a good story. The emotion that text caused me, so many decades after the events it recounts, left me wondering why it would have had such an impact on me.

It took many years before I realized that there was a name for this type of text – beautiful as only literature can be and factual as only journalism can be – Literary Journalism. And it took me even longer to find the courage to try to answer the biggest question of all: how to reach the reader and touch him so deeply that he will want to change the world? (Journalist's question) But also: if I felt that way about a journalistic text, would it be the same for other readers? (researcher's question)

Those questions are difficult to answer. But both journalists and researchers have an obligation to ask tough questions. So, more than twenty years after my first contact with Hersey's masterpiece, I decided to seek answers not only based on my knowledge as a reporter, but also as a researcher. Not only based on Communication Sciences, but also on Neurosciences.

One would have to go back more than five centuries, to Johannes Gutenberg's invention of moveable characters (Davis 2019), to find a period as disruptive in communication and the press as that experienced since the beginning of the twenty-first century. As Vallejo (2020, p. 124) summarises: "Right now we are immersed in a transition as radical as Greek literacy. The Internet is changing the use of memory and the very mechanics of knowledge".

This research comes in a context of huge contradictions regarding the consumption of and access to information. On the one hand, there is more news than ever before (Fenton 2009), partly because there have never been so many producers of information nor so many readers. But on the other hand, it is clear how difficult it is for the press to monetise their internet audiences (Cagé 2016).

Between 1970 and 2016, the year the American Society of News Editors stopped counting, more than five hundred daily newspapers closed, while the others cut news coverage or reduced the size of the paper or stopped being printed (Lepore 2019). By 2000, only three hundred and fifty of the remaining one thousand five hundred daily newspapers in the United States were independently owned.

Despite a growing digital audience, this does not translate into income for information producers, creating new paradoxes in the media context, as a small number of actors reach an extremely wide audience. In 1965, newspaper turnover in the US was worth 1% of GDP and in the twenty first century only 0.2% (Cagé 2016).

It could be said that this is an evolution of the business model, as it happens in many other areas. However, the media cannot be seen as any other company. "Their main objective is the provision of a public good: quality, free and independent information, indispensable to democratic debate, not the maximisation of profit" (Cagé 2016, p. 112).

A lot has changed since I became a journalist: reduction of means in newsrooms, imposing a "sitting journalism" (Neveu 2014, p. 535), averse to in-depth information; reduction of readers (Andi et al. 2020); global crisis for the business model, with downward curves of audiences, advertising and employment (Pew Research Center 2019).

Journalists no longer control information (Andi et al. 2020). Good information, quality and in-depth journalism is, by comparison, expensive. Hence, it reaches the elites more. Especially in the last two decades, journalism itself – the way news is covered, reported, written and edited – has changed, having to contend with the growth of fake news. Information has become both more chaotic and free (Lepore 2019).

Here we come to another of the paradoxes of this global information industry that has been turning into a network industry (Deuze 2017). It seemed that technological advances would outdate the concept of mass media, characterised as large, heterogeneous and dispersed, when in fact they came to modify this relationship, which is now more personal, private, directed, interactive and diffuse. Instead of their disappearance, the

notions of mass media coexist with interpersonal and individual communication (Deuze 2021 and Fenton 2012). At most, some scholars argue, we will now have an individual mass communication (Fenton 2012).

Such changes are largely due to the dissemination of information via the internet. Once again, the result has not been as categorically positive as many have come to predict. If it is true that the possibility of almost infinite space online (as opposed to the rigidity of the limited number of pages of printed newspapers) means more news, and that technology facilitates diversity, what has been verified is that quantity is not synonymous with quality, with the desired diversification being replaced by the homogenisation of discourse in the public space. Although information products are varied, they often tell the same stories, from the same perspective and using the same information material (Fenton 2009).

Forgetting that the internet is a revolutionary form of distribution, but not necessarily a revolutionary form of content production (Edge 2014), it was idealised as democratising peoples, discouraging monopolies and decentralising information.

Yet, the business model based on "free" has caused, on the contrary, concentration (Freedman 2016). As Curran et al. (2012) tell us, the internet has not changed the world as imagined because, as with all other technologies before it, its impact depends on context: "The internet has not promoted global understanding in the way that had been anticipated because it has ended up reflecting real-world inequalities, linguistic divisions, conflicts of values and interests. The internet has neither spread nor rejuvenated democracy" (Curran et al. 2012, p. 180).

Although some scholars call the idea that newspapers are not profitable a "myth", being more correct to say that they make money, but not as much as before (Edge 2014, p. 223), the truth is that journalism and journalists live under enormous pressure, with a growing trend towards the precariousness of professionals. Evolving towards a post-industrial model (more individualised and flexible), digital introduced a new media logic (Deuze and Witschge 2018) and changed the profession: "Once organised in formal institutions, where contracted labourers would produce content under structured conditions, today the profession is much more precarious, fragmented and networked" (Deuze 2017, p. 10).

All these seemingly paradoxical findings support the view that each information technology brings its own powers and its own fears. More importantly, they force us to reflect on how each new medium alters the nature of human thought (Gleick 2012).

The twenty first century has been one of enormous challenges and losses for journalism and journalists. You may wonder why it is important to save journalism. While it is true that it is a profession like many others, it is also true that it is not like any other, and that journalism has a crucial role to play as a guarantor of democracy.

Defending that democracy is a journalist duty (Adams 1994), it is also important to understand how journalism is fundamental to democracy. It informs, investigates and analyses, promoting mutual understanding, giving voice to people and mobilising them to act (Wahl-Jorgensen and Hanitzsch 2009), being considered the responsibility of citizens in democratic societies to keep themselves informed (Mendes et al. 2009). For *Pro Publica*, journalism is a way of denouncing injustices and abuses of power because it "sheds light on the exploitation of the weak by the strong and the failures of those in power, vindicating the trust placed in them".

It is nothing new that we live in two worlds – the real world and the media world (Potter 2018). But thanks to technology, the boundary is now crossed more and more unconsciously. A *smartphone* today has greater processing power than the computer that guided Neil Armstrong to the moon and the number of people connected to the internet has risen from 400 million in 2000 to 3.5 billion in 2016 and crossed the 4 billion mark in 2021. Every day we send 269 billion emails, post 350 million photos on Facebook. Every second 60,000 searches are made on Google. By 2020, we generated as much information every two hours as humans have generated in two thousand years of existence (Susskind 2018). Every half minute a book is published (Vallejo 2020).

The technological landscape has changed the consumption of news, however, the "excess" of information (Gleick 2012) enabled by technological facilities begins to be identified as a "burden" for readers, in what is now also being identified as news avoidance. The Reuters Digital Report shows high levels of people admitting they actively avoid news sometimes or often, even by those who are otherwise very interested (Newman et al. 2023). Some consumers express themselves overwhelmed by the amount of news, especially when accessing it through social networks. Such a sensation, caused in part by the cognitive impossibility of encompassing so much information, carries the danger that citizens avoid news to defend themselves due to these perceptions of burden, excess and inability to keep up (Lee et al. 2017).

It would even be naive to think that society could deal with the current information avalanche with the same tools as before. And it is also for this

reason, because new problems require new solutions, that I decided my research would have to reflect another way of looking at journalism's problems.

Is information seen differently because it is acquired by reading a news text or a literary journalism text? Will different styles of journalistic writing have different effects on receivers? Are there different reactions to reading on paper or on electronic devices? Do readers know how to distinguish the journalistic contents presented to them?

To find the answers, I chose to look at a genre that is characterised by being the opposite of ephemeral and accelerated information: literary journalism. Then I added a research design that would allow us to go beyond conscious responses to our relationship with journalistic texts, adopting neuroscience's methods to understand the reception of news articles.

Faced with this somewhat ambitious goal, the first thing to do was to delve into Hersey's text, better understand what literary journalism is and look into the functioning of brain and emotions.

Lisbon, Portugal Isabel Nery

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