

Francesco Biondo / Gevisa La Rocca /  
Viviana Trapani (eds.)

# Information Disorder

Learning to Recognize Fake News

**FAKE  
NEWS**



PETER LANG

Francesco Biondo / Gevisa La Rocca / Viviana Trapani (eds.)

## **Information Disorder**

The Fake News project was developed as a social project to suggest an idea of a plural, open, and dialectical society. One product of social action is public opinion, which directly and indirectly influences policy decisions, including those concerning the control and prospects of social innovation, thus exerting pressure on any kind of democratic regime. Disinformation hinders the free process of public opinion building by using various means to negatively influence public opinion with the effect of widening the chasm between decision-making power and active citizenry, who in turn needs to be properly informed to usefully contribute to achieving publicly shared goals in a transparent manner.

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Cinzia Ferrara & Marcello Costa

## The form of written thought

**Abstract:** How can the graphic and typographic quality of the layout of a text become an element that can interpret the truthfulness and reliability of news? That is, how can aspects related to the layout of a newspaper article, the choice of typeface, the priority of the information, and the editing of the text (correction of imperfections, typos, syntactical and content errors), highlight fallacies, inaccuracies or total falsehoods reported in the news? And again, what is the relationship between editorial graphic design, cognitive dysfluency, and recognising fake news?

The essay aims to investigate the sphere of the form by which journalistic content is translated, an aspect that is little studied but not irrelevant in its relations to readability, accessibility and cognitive dysfluency, in order to recognise fake news, an aspect that may not entirely replace but certainly complements the various assessment tools, such as algorithms built specifically to prevent its dangerous spread.

**Keywords:** Editorial graphics, typography, fluency, dysfluency, fake news, good news

### Fake news and design

Only on the surface does dealing with fake news involve addressing a new topic, because fake news has always existed and the practice of spreading disinformation is as old as the printed word, perhaps even older. In Sicilian literature *The Council of Egypt* (Sciascia, 1963) is centred on the story of a sensational, later uncovered, fabrication of a false translation of an Arabic manuscript, passed off as a shocking political text when in fact it was simply a biography of the prophet Muhammad. It is an *ante litteram* fake news in which the Abbot Vella, Maltese by birth, haphazardly takes apart and reassembles the ancient codex, rewrites it in Arabic characters passing them off as Mauritanian-Arabic characters, and translates the text without knowing the Arabic language, and goes on to teach having been assigned the first university chair in Arabic. It would be a masterpiece if it were not an Arabic fake.

And while the protagonist of the novel set in the late eighteenth century will pay with prison for this daring act of deception, the same does not happen, or at least not always, to those who are held accountable for what is falsely published. There are few laws or actionable penalties against those who spread fake news, and no incentive to act responsibly in the sphere of public communication. But dealing with fake news also means dealing with an issue that

is by no means new, namely that of reading. The act of reading has remained unchanged for a few hundred years (Spiekermann, 2003) in the ways in which it takes place, although the media for reading have changed from paper media printed with ink to the technological media of monitors by means of the light pulse of pixels. Just as design techniques have changed over time with regard to the graphic design of various types of textual content, with the aim of “translating” them into a visual form, intervening macro-typographically – relating to typographic structure, layout –, dealing with the print format, the size and layout of text columns and images, the organisation of hierarchies of titles, subtitles, and captions, as well as micro-typographically dealing with the letter, space between letters, word, space between words, line and line spacing, and text column (Hochuli; 2018, p. 7), it must be clear that the intent is precisely to make the enjoyment of the text optimal, acting on its form to the extent that it is closely related to its readability, its accessibility and ultimately, which is by no means a secondary aspect, to the control of the very truthfulness of the text. However, the terms readability, accessibility, and truthfulness should be further examined.

### **Readability, accessibility, truthfulness**

Being readable, with regard to writing or understanding, and the quality of what can be read or understood without too much effort are the dictionary definitions of the term readability (Treccani, 2022). It is a feature of the text that thus takes into account two separate aspects: a physical one and a linguistic one. Legibility is thus related to the ease with which the individual letters that make up a text can be distinguished. The choice of typeface, construction of a typographic scale, definition of line spacing ratios, and paragraph alignment are essential factors. To refer to these and other formal issues is not to speak only of aesthetics, but also of the control of visible elements that make optimal enjoyment of the text possible (Hochuli, 2018).

These are elements that on the Web, without the physical constraints of the paper medium, are variable within a responsive space that dynamically adapts to devices of different sizes and the personal settings of individual users.

So, while for a print product, readers are certain about how the content will be enjoyed, in the digital space they can only predict and design scenarios that ensure an equivalent and accessible experience for all.

Readability, on the other hand, is assessed by the fluency of the reading, the ability of the text to be understood for the vocabulary used and the level of complexity of its syntactic and semantic structures.

It can be measured by formulas. In the 1970s, Rudolf Flesch and J. Peter Kinkaid empirically calculated the readability index based on the average number of syllables per word and the average number of words per sentence. In Italy, in 1988 the Gruppo Universitario Linguistico Pedagogico (GULP) of the Sapienza University of Rome developed the *GULPEASE Index* (Lucisano & Piemontese, 1988), gauged to the Italian language and based on several linguistic variables: word length and sentence length in relation to the number of letters.

Readability is one of the basic requirements for accessibility. Linguistically, in order for content to be accessible, it must be expressed in a common language, through clear and short sentences (W3C, 2022). The process of associating written or printed words with their correct sound is called text decoding, which needs to be automatic for people to read fluently.

On the Web, decoding is further facilitated by structuring content semantically according to an articulated hierarchy of markers (html tags) that define headers, paragraphs, bulleted lists, citations, multimedia elements, as well as the individual areas into which a page is divided: header, main content, footer, content in the margin, banners.

This process facilitates not only the decoding of text by readers but especially by technologies such as browsers, search engines, and screen readers where the purely visual aspect is irrelevant.

The graphical representation and semantic structure of the text therefore need to be independent of, yet consistent with, each other.

The same content can have multiple graphical representations because there are multiple devices in which the content is displayed as well as the individual user's personal settings in viewing them. A designer's choices have to be guided by an understanding of the technologies and the users' needs and habits.

Although these are now accustomed to scrolling the content of web pages, especially on mobile devices, studies based on eye-tracking show that 80 % of users dwell more on content placed at the top of the page (above the fold) where scrolling is not necessary and less on content at the bottom (below the fold) (Fessenden, 2018) (Fig. 1).

Therefore, it is deemed necessary to place the most important information at the top of the page according to an "inverted pyramid" approach, now well established in online journalism (Nielsen, 1996): starting with the conclusions by providing visual cues to encourage page scrolling.

These practices, which are now widely shared, constitute the web standards against which the quality of online content is measured in terms of performance, accessibility and indexing using specific metrics. So, on the one hand, we have methods for optimising the source code of the page, structuring the content



**Fig. 1:** Graph showing that the user's gaze focusses often, but not always, on the top of the page. The actual distribution of the points of focus will depend on the specific design and the user's goal in visiting the page (Nielsen 1.jpg).

semantically and thus satisfying machine coding, and on the other hand we have design guidelines for organising information hierarchically within layouts that speed up scanning and tracking.

Such Web standards, though useful and necessary to optimise production time, development, performance, accessibility and communication, inevitably tend to generate standardisation, which makes it more difficult to discern true information from false or misleading information. If readability and accessibility are ensured this way, how can we assess truthfulness?

In the case of print publications, we are now able to distinguish the authoritativeness of sources through precise design choices such as paper size, typefaces, images, and colours, all aspects that are less pronounced or most often homologated on online platforms. Large cover photos (hero images) and neatly designed layouts that meet web standards give even those sources that make less than



**Fig. 2:** The Guardian decided to share its news on social media by including its brand name and a date in the main photo, precisely to credit the news, frame it temporally and thus distinguishes it from the homogeneous stream of posts (the\_guardian\_tweet.jpg)

correct use of information a strong visual presence and a superficial patina of credibility.

This problem reaches its critical peak on social media, where the news sharing elements do not allow us any longer to find the formal and identity-related characteristics of the source but an automatically generated component consisting of an embedded image and an SEO-friendly title, often highly emotive and designed to garner reactions and shares (clickbait), which standardises the appearance of the news stream and gives equal import to every post, regardless of the source.

The latter aspect gives us a flow that mixes and homogenises true with verisimilar news. A lack of attention on our part can therefore result in the proliferation of bad information on the Web. For instance, the Guardian has decided to share its news on social media by including its brand name and a date in the main photo, (Moran, 2019) precisely to credit the news and frame it in time (Fig 2).

The study conducted by Gordon Pennycook and David Rand (Pennycook et al., 2021) attributes the act of sharing or commenting on a news item without first verifying the accuracy of the sources to lazy thinking. The simplification and standardisation introduced to improve web communication and speed it up risk making it possible to easily camouflage fake news. Perhaps we need to rethink complexity, differentiation, and slowness in web communication to combat laziness by employing the alterations of cognitive dysfluency.

### **Fake news, text form, and cognitive dysfluency**

Returning to the proposed topic of systematising fake news and text form, we are interested in understanding how editorial graphic design for digital and web products can make a contribution to the disambiguation between real news and fake news that readers may come across on a daily basis, and whose proliferation cannot solely be attributed to the hypertrophy of the Internet and social media, and against which there are several ways to protect oneself, first and foremost by going to the library to check the sources (Ginzburg, 2021).

We begin by analysing the formal and conceptual aspects in a graphic layout that relate to the choice of appropriate fonts (serif or sans serif), their readability, and the hierarchy of information, dealing with macrotypography. This can affect cognitive fluency, understood as the natural flow of language, which can be associated with the ease of thinking and understanding something. But what can be understood as a positive and desirable aspect – as it surely is in so many contexts such as education – relating to the fluency and comprehensibility of the text free of interruptions, blocks, repetitions or fragmented words, translates into the action of reading, into an element that prevents further and deeper reflection on the text, which is achieved instead by making it less simple and thus inducing cognitive dysfluency.

This can also be achieved through a graphic design that instead of being devoted to simplification of the structure of the language at all costs, with the fragmentation of the text into small paragraphs identified by numbered headings and subheadings, with the introduction of bulleted lists and initial indexes, with the use of large fonts and line spacing, and finally with an approach that makes reading an accessible and didactic mode, places “obstacles” in the reading phase. By slowing down the process, these help readers in the text comprehension phase by inducing them to reflect and evaluate more carefully the information acquired.

Adam Alter, a professor of marketing and psychology at New York University’s Stern School of Business, says that the presence of a cognitive obstacle leads

one to think more deeply and use information more fully precisely because the reading and comprehension of the text is more accurate and in-depth. This produces a twofold benefit at the cognitive and social levels (when the issues addressed have such value).

And he demonstrates this through a double Cognitive Reflection Test (Alter, 2013, p. 438) in which he finds greater attention and comprehension of readers by intervening on the dysfluency of the text, only by changing graphical aspects such as colour (grey and not black), size (10 and not 12 points) and typeface shape (italic and not regular) that make reading more complex and slower, and therefore more attentive.

The above leads us to argue for the value that the quality of graphic design, and with it the structural and formal quality of the textual content take on in the relationship between readability and disfluency, which is capable of transforming into tools to help us find our bearings in the dark woods of disinformation that continues to grow out of all proportion on the internet.

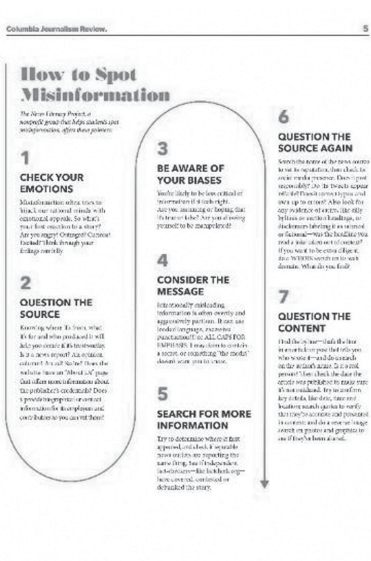
We are well aware that what we posit here is obviously at odds with web design guidelines aimed at the constant search for fluency to improve comprehension of a text, but equally aware of the value that editorial graphic design takes on and that can induce cognitive dysfluency by hindering and slowing down reading to increase the attention threshold, an element that can help us understand better as well as discern between true and false in public communication.

The topic was the subject of a unique experiment carried out in 2018 by the Columbia Journalism Review, in collaboration with TBWA \ Chiat \ Day . Magazines imitating authoritative newspapers containing obvious fake news on the cover or inside were sold at a temporary newsstand set up in Bryant Park in Manhattan. The experiment was aimed at raising awareness of the risk of fake news and its dissemination, and paradoxically, the fact that these were placed within a familiar and recognisable setting made them even more implausible than when they were online, stripped of any design element. The experiment was explained to those who noticed the paradox and asked for information (Pope, 2018). They were given a guide to recognise and protect themselves against fake news (Figs. 3-4-5-6-7).









**Fig. 3-4-5-6-7:** The Columbia Journalism Review, in collaboration with TBWA \ Chiat \ Day carried out an experiment that was aimed at raising awareness people of the risk of fake news. Magazines imitating authoritative newspapers containing obvious fake news were sold at a temporary newsstand in Manhattan. At the end of the experiment, they were given to people a guide to recognizing fake news (3. cjr\_newsstand.jpg, 4. cjr\_publications.jpg, 5. cjr\_cover publication.jpg, 6. cjr\_guide\_to\_misinformation.jpg, 7. cjr\_guide\_to\_misinformation2.jpg)

### Conclusions

The topic examined above requires further research because, as the sparse available scientific literature shows, it is a new and little-known topic. But it is equally interesting in its implications involving the form of the text, its reading and the cognitive process that activates understanding. We believe that design cannot be limited to being a discipline merely capable of generating even complex forms and that it is fully capable of activating processes, inducing behaviours, and providing instruments for reflection. In an age of false information on the Web, where readers are exposed to and must evaluate endless sources online, design is an even more powerful tool (Hoory, 2017). So, we need to continue designing and experimenting by pushing the boundary that separates fluency from dysfluency in the text, in the belief that editorial form can aid comprehension of content and make readers slow down while reading, thus fostering

reflection and comprehension and becoming a valuable antidote to the proliferation of fake news.

There is a need for simplicity as well as for complexity, which is in fact the most faithful expression of the world we inhabit and which shows that we need more time, more attention, and more care in what we read and what we understand, moving in the opposite direction of that process of social acceleration to which we are all exposed.

It makes us miss a lot, maybe too much, of the meaning of things, not just the written ones.

## Attributions

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