Buletinul Ştiinţific al Universităţii Politehnica Timişoara
Seria Limbi moderne

Scientific Bulletin of the Politehnica University of Timişoara
Transactions on Modern Languages

Vol. 25, Special Issue: Language, Communication and Society / 2026

Media Responsibility in Unprecedented Times: Coverage of the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic received incredible attention by all types of news sources. The resulting stream of data can be used to observe the state of journalism in Italy, current mechanisms of news production, and consumers' relationship with the news. The present article will present the results on two parallel studies: the analysis of the coverage of the AstraZeneca vaccine and its alleged adverse effects; and a survey involving 300 Italian respondents, which recorded their habits, preferences and attitudes in news consumption, and how these were influenced by the COVID-19 pandemic, especially on the level of trust and overload.

Keywords: COVID-19 pandemic, journalism studies, news fatigue, tabloidisation, junk news

1. Introduction

The COVID-19 pandemic has been an unprecedented event in contemporary history; as the disease commanded the world's attention, all media, both traditional and social, simultaneously focused their attention on this single extraordinary event, and for a considerable time period. This has created a tremendous stream of data which can be used to observe the state of journalism in Italy, its mechanisms of news production, and the relationship that people have with the news. This article will use the pandemic as a 'magnifying glass', in order to observe more closely broader phenomena and trends in news reporting and news consumption, which both pre-date the pandemic, and have largely persisted after it. In particular, the article will present the results on two parallel studies that were conducted in 2021: the analysis of the coverage of one specific topic by the Italian traditional media, i.e. the Vaxzevria (formerly AstraZeneca) vaccine and its alleged adverse effects; and a survey which involved

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300 Italian respondents, which aimed to observe their habits and preferences in media consumption, how much their relationship with the news was influenced by social media, and if and how the COVID-19 pandemic changed their relationship with mainstream media, especially on the level of news consumption, trust and overload.

Although the studies presented here are not recent, they remain extremely relevant in order to observe some systematic issues that pertain to the language and strategies employed in news production that are still ongoing to this day. Moreover, it can be argued that the COVID-19 pandemic was one of the last major global events that was entirely covered without any influence and 'pollution' from generative AI in the process, as will be discussed at the end of the present article.

Research in the past few years has highlighted how mainstream media and 'fake news'[i] do not sit at the opposite ends of some imaginary 'news spectrum' – one that opposes false content fabricated for an economic gain to unquestionably real and trustworthy news stories. On the contrary, they operate in the same environment and according to the same economic 'rules': the switch from print to digital that occurred in the past two decades has increased the competition in the journalistic field, and the resulting overproduction of content has led to news becoming a 'product' among many others (Nalbone and Puliafito 2019). With advertising revenues faltering and insufficient earnings from the sale of print copies and online subscriptions, newspapers have had to adapt to new and unstable business models, which mostly rely on quantity over quality: all content must be produced with the need to attract attention in mind, in order to compete with other news sources. Journalists are forced to follow what is 'trending' at the moment in order to not be 'left behind', often resorting to recirculating texts written by news agencies or for press releases with barely any change to the original, resulting in articles that are almost identical, to each other – a phenomenon described as 'churnalism' (Zakir, in ibid.). The 'high-speed' news cycle and the need to publish a story before everyone else can also lead news outlets to carry out little or no basic fact checking, relying on related stories to write a new article, filling the text with hedging language to convey that they are essentially perpetrating a story without verifying its (sometimes unreliable) source (Silverman 2015).

Another strategy to attract readership is to create articles that are more and more emotionally evocative. This is part of the phenomenon of 'tabloidisation', which sees the diffusion of news stories that require people to respond impulsively, leaving them with less and less time to examine the subject rationally (Örnebring and Jönsson 2004).

Tabloidisation is linked with current journalistic practices such as 'clickbaiting' news readers, that is, creating over-the-top and often inaccurate headlines to attract visitors' 'clicks' to a certain webpage. Today, "[t]he online media economy is largely based around monetization of 'views' through advertising revenue. As such, clicks and page views translate directly to a dollar amount" (Chen et al. 2015, 1). This has pushed even traditional media providers to employ ambiguous and sensationalist

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headlines, using emotional language and promising incredible content beyond the link, whereas the body of the articles usually contain more accurate and nuanced content.

Moreover, Silverman (2015) observed how accredited news sources often write about 'rumours' or 'fake news' in ambiguous ways, due to the desire to take advantage of their newsworthiness (Tsfati et al. 2020; Galtung and Ruge 1965); indeed, 'fake news' tend to involve well-known public actors, have emotional or negative tones, and have something to do with current events, making people more likely to 'click' on them. However, covering a 'fake news' story with little attention essentially puts on it a "stamp of credibility" by the press (Silverman 2015, 13).

These practices have greatly contributed to a sharp decline in trust in the media in the past decade (Newman et al. 2025), and to creating a media environment where consumers become overloaded and overwhelmed (Holton and Chyi 2012): this feeling of 'news fatigue' concerns on average almost a third of news consumers globally, and it seems to be spreading over time (Newman et al. 2019); consequently, they have begun to avoid voluntary news consumption. At the same time, as information is "pushed onto consumers" on social media (Chen et al. 2015, 1), many have developed the belief that news will 'come to them' while they are doing something else, with no need for the user to actively look for them (Mitchell et al. 2016). This habit of accessing the news indirectly has resulted in 'news grazers', i.e. people who often but superficially check the news, often stopping to the headline alone (Molyneux 2018). They are especially at risk of becoming misinformed due to both 'fake news' (articles containing false information on purpose) and 'junk news' (Venturini 2019), i.e. news articles which were created by established media outlets with no malicious intent, but with virality over quality in mind.

Indeed, while social media is usually seen as playing the main role in the diffusion of false content and hoaxes, the difference in trust levels between social media and mainstream media highlighted by Newman et al. (2020) suggests that the latter have had a much greater weight in shaping people's perceptions and actions compared to social networks, especially since trust and reliance on mainstream news outlets might make any mistake on their part far more harmful.

In this sense, the COVID-19 pandemic was "a reminder that even weakened media play a critical role in informing populations and shaping opinion" (ibid., 13): the crisis allowed the closer observation of some of the 'high-speed' media system's flaws highlighted thus far.

2. Italian media and the COVID-19 pandemic

The phenomena described thus far apply to Italy as well: before the pandemic, the Italian media sector had already been criticised for some pre-existing weaknesses, such as the fact that

> "the reduction of revenues and of investments in information, the related regression in the use of fact-checking mechanisms in the field of the journalistic profession, the

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> lack of time to update and produce information (especially online) are prone to compromising the adequacy of the information supply in terms of accuracy, in-depth analysis and news coverage." (AGCOM 2020, 47, my translation)

Not only had these issues contributed to the fall in newspaper readership and to the decline in revenues even before the pandemic; arguably, they were also partly responsible for the lower editorial standards adopted in news reporting during the COVID-19 outbreak (Newman et al. 2021), which will be discussed below.

Before the pandemic, in 2019, Italians' preferred sources of information included both traditional and 'new' media, such as social media and search engines (CENSIS 2020). At the time, television news were considered the most reliable source of information (CENSIS 2018), perhaps due to the perceived danger of finding 'fake news' and misinformation online that had spread among Italians in the previous five years (ibid.). However, 20.2% of Italians reported having lost trust in all news outlets pre-pandemic (ibid.), in line with global trends.

As COVID-19 began to spread, most people (60.1%) turned to traditional sources such as television newscasts, 24-hours news channels and online newspapers to find reliable information during that complicated time (CENSIS 2021). There was still little information available to the public; nonetheless, both mainstream and alternative media rushed to fill this void, making COVID-19 the topic with the greatest media coverage in the history of the Italian media since the Second World War (AGCOM 2020). This created a situation defined as *data deficit*, in which "much information exists but it is misleading, confusing, false or even harmful" (Cubbon 2020). The pandemic created a fertile environment for the spread of false and misleading information, leading the World Health Organisation to warn the public about the risk of an 'infodemic', i.e. "an over-abundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it" (WHO 2020, 2).

Indeed, in such situations, the spread of rumours, misinformation and eventually hoaxes becomes more likely (First Draft 2021). Conspiracy theories began to appear following the first news of the COVID-19 outbreak: for instance, some claimed that the virus was a biological weapon manufactured in a Chinese laboratory, or that it was a consequence of 5G networks (Douglas 2021). Later conspiracy theories focused on possible 'alternative remedies' to the disease, such as the consumption of vitamin C (Reuters 2020), and even urine (Reuters 2022); then on the effectiveness of drugs such as hydroxychloroquine (Bertin et al. 2020) or ivermectin (Goldberg 2021) to treat COVID-19 symptoms.

As a result, trust towards traditional news outlets sharply dropped in 2020, from 40% to 29% (Newman et al. 2020). The decline was presumably linked to the overload of conflicting information during the first year of the pandemic: Newman et al. (2021, 88) underlined how Italian media tended to focus "on speculation and leaks about possible changes to Coronavirus-related restrictions, rather than on the actual decisions, together with sensationalist and often contradictory coverage of facts

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related to the pandemic and vaccines". Building on these observations, this study aimed to observe more closely both the mainstream media coverage of events connected to the COVID-19 pandemic, and the effects that it had on Italians' media consumption habits. The following sections will report the results of two parallel but strongly related studies: an exploratory analysis of how the mainstream media covered events concerning the Vaxzevria (formerly AstraZeneca) vaccine, and a survey which examined people's habits, preferences and attitudes in news consumption in the aftermath of the pandemic.

3. The 'AstraZeneca affair': an exploratory study

Media coverage of COVID-19 vaccines was a particularly sensitive topic due to pre-existing 'anti-vaxxer' movements (Benoit and Mauldin 2021). During the pandemic, followers of 'anti-vax' social media pages increased by 19% (ibid.), and 'anti-vax' movements turned to opposing COVID-19 vaccines (Armitage 2020). With these premises, a correct coverage of COVID-19 vaccines on the part of mainstream media was essential, especially since partisan factions or conspiracy theorists have a history of 'hijacking' the news to support their positions (see Soares and Recuero 2021). For this reason, the depiction of the AstraZeneca vaccine on the part of mainstream media deserves close attention.

The vaccine was approved for administration in Europe in early 2021 (Boffey 2021); at the time, the vaccine was already at the centre of attention because of its alleged inefficacy on seniors: the German newspaper Handelsblatt had published an article stating that, according to an anonymous government source, the vaccine had an effectiveness of only 8% in over 65s (Boytchev 2021). The information was unsubstantiated, since at the time there was not yet enough data on its efficacy (BBC News 2021a); however, the news was reported as real by the Italian news website Quotidiano.net (2021).

Confusion over the efficacy of the AstraZeneca vaccine and over which demographic should receive it persisted in the media for weeks. In Italy, the AstraZeneca vaccine was approved by the national medicine agency, AIFA, on 30 January 2021 (AIFA, 2021), and it was first recommended for under-55s; its use was extended to under-65s in mid-February, then to over-65s in early March. Finally, after apprehension caused by the reports of thrombosis as possible side effects in younger people, its administration was banned to those under 60 years old (see Puente 2021 for a detailed timeline).

At the same time, the AstraZeneca vaccine was also involved in a different controversy: of the 80 million doses that had to be delivered to the European Union in the first quarter of 2021, only 30 million were actually sent. As a result, the EU sued AstraZeneca for breach of contract at the end of April 2021 (BBC News 2021b). In mid-May, Italy had received less than 50% of the expected AstraZeneca doses (GIMBE 2021a), which slowed down the national vaccination plan by about four weeks (il Post 2021). Following the delay and the legal dispute, the perceived safety of the vaccine decreased considerably, especially when compared to other available

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vaccines; a result of these concerns, Italians became severely more likely to refuse the AstraZeneca vaccine (YouGov 2021a).

A few weeks later, in early March 2021, cases of thrombosis (in some instances, fatal) in people who had been vaccinated with AstraZeneca were reported in Austria, Denmark and Norway; while the European Medicines Agency (EMA) performed a review of the issue, several European countries suspended the use of the vaccine (see Wise 2021 for a timeline of events). Italy suspended the use of the AstraZeneca vaccine between March 15 and March 19 (RaiNews 2021a); on April 7, the EMA found that "unusual blood clots with low blood platelets should be listed as very rare side effects of Vaxzevria (formerly COVID-19 Vaccine AstraZeneca)", however "the overall benefits of the vaccine in preventing COVID-19 outweigh the risks of side effects" (EMA 2021a). Nonetheless, many governments elected to restrict the use of the vaccine to those who had been least affected by its side effects (people over 60); in Italy, the decision was supported as a precautionary measure by AIFA, which still reiterated that the administration of the vaccine was still permitted to all age groups (AIFA 2021).

While caution was warranted, top-down communication – from the government or health authorities, to journalists, to the general population – was chaotic (see Puente 2021). In June 2021, the EMA denounced on Twitter how misinformation was 'making the rounds'[ii]; eventually, the agency specifically identified one of the sources of misinformation as "an article published on an Italian newspaper that cited erroneously one of our experts" (ANSA 2021a, my translation; see Wise 2021). The article had been published on the newspaper La Stampa and contained an interview to Marco Cavaleri, Head of Biological Health Threats and Vaccines Strategy for the EMA, who had allegedly spoken against the use of the AstraZeneca vaccine (HuffPost 2021). In an example of 'news cannibalism' (i.e. "taking material from other news outlets without follow up or attribution", Phillips 2010, 52), the interview was disseminated by other outlets without fact-checking (e.g. Il Fatto Quotidiano, 2021). In the meantime, news about the deaths allegedly connected to the AstraZeneca vaccine began to dominate the Italian news cycle. Pilati and Anselmi (2021) identified 'peaks' of discussion on the topic: articles about 'suspicious deaths' represented 15% of total headlines in March, when the deaths were first reported, and 20% in June, when a young Italian girl who had been vaccinated with AstraZeneca died after suffering a thrombosis.

Given the extensive media attention dedicated to the AstraZeneca vaccine and the relevance of the topic to the public at the time, I carried out an exploratory analysis of the language that was used in the press to discuss it. The main goal was to ascertain whether what had been observed thus far as anecdotical instances of questionable headlines were actually part of a greater, general trend. Thus, I employed the open-source platform *Media Cloud*[iii] (see Roberts et al. 2021), whose Explorer tool allows to observe how a certain topic is covered by digital news media in a given country or language. I used *Media Cloud*'s pre-compiled collection of sources 'Italy – National', which included 181 media sources[iv], and inspected it

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beforehand to verify that it contained the main Italian online news outlets according to AGCOM (2018) and Newman et al. (2021). I elected to perform two separate analyses, one concerning the discourse on the delays in delivery of the AstraZeneca vaccine; and another regarding the language used in reporting of adverse effects and deaths allegedly caused by the vaccine, in order to see how the discussion had evolved.

The first analysis concerned the use of the word 'AstraZeneca' between 15 January 2021 and 6 March 2021. The dates were chosen considering events such as the EMA authorisation to the use of the vaccine (on January 29), the subsequent authorisation from AIFA (January 30), and the first reports of deaths allegedly related to the vaccine (March 7); the period selected in the *Media Cloud* analysis allowed to observe how the media discussed the vaccine before and after its approval, but before the deaths were reported. That timeframe also corresponds to the delays in the delivery of vaccine doses described above.

Language analysis (carried out by sampling 10,000 news stories) produced a list of the words most commonly related to 'AstraZeneca'; Table 1 contains the first 50:

	Term		Word count		Term		Word count
	Ita (original)	**Eng (transl.)**			**Ita (original)**	**Eng (transl.)**	
1	Astrazeneca	Astrazeneca	9023	**26**	Johnson	Johnson	413
2	Vaccino/Vaccini	Vaccine/s	7706	**27**	Italia	Italy	406
3	Dosi	Doses	3278	**28**	Forze	Forces	403
4	Pfizer	Pfizer	1350	**29**	Previsto	Expected	399
5	Somministrazione	Administration	1185	**30**	Utilizzato	Used	392
6	Moderna	Moderna	1113	**31**	Oxford	Oxford	388
7	Consegne	Deliveries	1109	**32**	Marzo	March	387
8	Over	Over	1000	**33**	Ritardi	Delays	386
9	Covid	Covid	983	**34**	(Via) libera	All clear	386
10	Arrivate	Arrived	930	**35**	Salute	Health	385
11	Febbraio	February	652	**36**	Età	Age	381
12	Settimana	Week	642	**37**	Ricevuto	Received	373
13	Europea	European	628	**38**	Prodotto	Product	369
14	Personale	Personal	586	**39**	Variante	Variant	364
15	Regione	Region	528	**40**	Categorie	Categories	355
16	Forniture	Supplies	514	**41**	Annunciate	Announced	346
17	Dati	Data	508	**42**	Partire	Starting	345
18	Prime	First	478	**43**	Medici	Doctors	345
19	Ue	Eu	473	**44**	Governo	Government	331
20	Vaccinale	Vaccine (Adj.)	450	**45**	Rispetto	Respect	327
21	Campagna	Campaign	437	**46**	Commissione	Commission	316
22	Farmaco	Medicine	436	**47**	Possibile	Possible	312
23	Taglio	Cut	422	**48**	Scolastico	School (Adj.)	308
24	Efficace	Effective	419	**49**	Trimestre	Trimester	303
25	Contratto	Contract	414	**50**	Fase	Phase	301

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Table 1. Top 50 words most commonly related to 'AstraZeneca' (15/01/2021 – 06/03/2021)

The analysis found that at the time, the Italian media mostly discussed the AstraZeneca vaccines in relation to these delays, as shown by words most often associated to 'AstraZeneca' (highlighted in green): these included 'delivery', 'arrived' (referring to 'doses'), 'supply' and 'delays'. Closer analysis through the Words in Context tool allowed to observe that apparently unrelated words were still connected to the topic (e.g. 'contract' referred to the one between the EU and AstraZeneca).

In the month following the news about the thrombosis cases, a drastic change occurred in the vocabulary associated to the vaccine by the Italian media. The second Mediacloud analysis concerned the use of the word 'AstraZeneca' between 7 March 2021 and 7 April 2021, covering one month from the initial reports of deaths allegedly related to the vaccine. A parallel search of the word 'Pfizer' was conducted in order to use it as a base for comparison of the vocabulary associated with 'AstraZeneca' (see Table 3).

	Term		Word count		Term		Word count
	Ita (original)	**Eng (transl.)**			**Ita (original)**	**Eng (transl.)**	
1	Astrazeneca	Astrazeneca	18983	**26**	Sospeso	Suspended	850
2	Vaccino/Vaccini	Vaccine/s	15601	**27**	Regione	Region	840
3	Dosi	Doses	4490	**28**	Settimana	Week	802
4	Somministrazione	Administration	3233	**29**	Consegne	Deliveries	802
5	Over	Over	2093	**30**	Bloccato	Blocked	786
6	Covid	Covid	1972	**31**	Johnson	Johnson	775
7	Pfizer	Pfizer	1585	**32**	Prenotazioni	Bookings	773
8	Lotto	Batch	1569	**33**	Salute	Health	757
9	Europea	European	1403	**34**	Precauzionale	Precautionary	727
10	Farmaco	Medicine	1216	**35**	Utilizzo	Usage	713
11	Casi	Cases	1216	**36**	Eventi	Events	709
12	Marzo	March	1193	**37**	Dell'EMA	EMA's	660
13	Arrivate	Arrived	1137	**38**	Paesi	Countries	654
14	vaccinale	Vaccine (adj.)	1121	**39**	AIFA	AIFA	622
15	EMA	EMA	1118	**40**	Siero	Serum	614
16	Moderna	Moderna	1116	**41**	Decisione	Decision	610
17	Italia	Italia	1054	**42**	Italiana	Italian	598
18	Tromobosi	Thrombosis	1045	**43**	Segnalati	Reported	588
19	Ricevuto	Received	1007	**44**	Sicuro	Safe	580
20	Morte	Death	976	**45**	Effetti	Effects	575
21	Rischio	Risk	960	**46**	C'è	There is	556
22	Sospensione	Suspension	935	**47**	Spiegato	Explained	550
23	Dati	Data	909	**48**	Gravi	Grave	545
24	Mar.	Mar.	892	**49**	Possibile	Possible	544
25	Campagna	campaign	857	**50**	Deciso	decided	544

Table 2. Top 50 words most commonly related to 'AstraZeneca' (07/03/2021 – 07/04/2021)

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The new analysis confirmed how AstraZeneca had become most often linked to 'risk', 'thrombosis', 'death', 'suspended' or 'suspension', and 'blood clots'; words such as 'events' were also found to be part of relevant multi-word expressions ('adverse events', i.e. 'side effects') through the Words in Context tool. While the results shown thus far are exploratory in nature, they seemed to confirm what was later termed as a "densification of negative associations" of the term 'AstraZeneca' (Semeraro et al. 2022, 8). Later studies subsequently highlighted how the use of emotional language related to the deaths and adverse effects was used in both alternative media and mainstream news media in similar amounts and ways, "with an almost always significantly higher emotional load with respect to a neutral language baseline", especially after the vaccine was suspended as a precautionary measure (ibid., 11). Similarly, Pilati and Anselmi (2021, 4) underlined how the news about AstraZeneca-related suspect deaths fit "a specific sensationalist theme", since "the issuance of news related to deaths or serious accidents have become a habitual practice both in tabloid and mainstream journalism".

Similar language was not found in association with the Pfizer vaccine, the main alternative to AstraZeneca at the time. This was confirmed by my own MediaCloud analysis, as can be observed in the Table below, which contains a comparison between the 50 words most associated to the two vaccines by the media.

Words unique to AstraZeneca in the top 100 words in the sampled stories		**Word used in both**		**Words unique to Pfizer in the top 100 words in the sampled stories**	
Ita (original)	**Eng (transl.)**	**Ita (original)**	**Eng (transl.)**	**Ita (original)**	**Eng (transl.)**
Lotto	Batch	Astrazeneca	AstraZeneca	Pfizer-Biontech	Pfizer-Biontech
EMA	EMA	Vaccino	Vaccine	Biontech	Biontech
Trombosi	Thrombosis	Dosi	Doses	Entro	Within
Morte	Death	Pfizer	Pfizer	Milione	Million
Rischio	Risk	Somministrazione	Administration	Anziani	Elderly
Sospensione	Suspension	Moderna	Moderna	Fragili	Fragile
Sospeso	Suspended	Covid	Covid	Forniture	Supplies
Bloccato	Blocked	Over	Over	Ospedale	Hospital
Precauzionale	Precautionary	Arrivate	Arrived	Trimestre	Trimester
Eventi	Events	Europea	European	Pazienti	Patients
Paesi	Countries	Marzo	March	Fiale	Vials
Dell'EMA	EMA's	Vaccinale	Vaccine (Adj.)	Moderna	Moderna
AIFA	AIFA	Ricevuto	Received	Studio	Study
Decisione	Decision	Casi	Cases	Totale	Total
Italiana	Italian	Farmaco	Medicine	Nuove	New
Segnalati	Reported	Consegne	Deliveries	Prime	First
Sicuro	Safe	Settimana	Week	Prosegue	Proceeds
Effetti	Effects	Johnson	Johnson	Distribuzione	Distribution
Possibile	Possible	Italia	Italy	Base	Base

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Deciso	Decided	Dati	Data	Risultati	Results
(Via) libera	All clear	Regione	Region	Varianti	Variants
Gravi	Grave	Campagna	Campaign	Operatori	Operator
Sospendere	Suspend	Mar.	Mar.	Inoculato	Inoculated
ABV[v]	ABV	Prenotazioni	Bookings	Sputnik	Sputnik
nazionale	national	Utilizzo	Usage	Mese	Month

Table 3. Top 50 words most commonly related to 'AstraZeneca' and 'Pfizer', compared (07/03/2021 – 07/04/2021)

These exploratory results reveal how public discussion about the Pfizer vaccine at the time only revolved around the deliveries of vaccine doses and the vaccination campaign, whereas vocabulary related to risks, side effects or suspensions was limited to the AstraZeneca vaccine.

This attention extended beyond the adverse effects themselves: anecdotal observation of headlines from March 2021 (through the Nexis Uni database and Google News) revealed that after multiple European countries (including Italy) decided to suspend batches of the vaccine that had been administered to people who later had a thrombosis, the Italian media began reporting assiduously where the 'incriminated' batches had been distributed – although no correlation had been found between a specific batch of AstraZeneca vaccines and the adverse effects. An advanced research on the Nexis Uni database revealed that in a single month, at least[vi] 226 articles whose headlines contained reports on the suspected batches had been published online, i.e. on average more than seven each day. For example, the news agency ANSA (the most trusted Italian news brand; Newman et al. 2021) reported 'Batch doses administered to 1,750 people, two cases of fever and muscle pain' (ANSA 2021b); the newspaper Corriere della Sera, the fifth most trusted news brand (Newman et al. 2021) published an article titled 'Suspected AstraZeneca batch, 12,000 doses injected in [the region] Emilia' (Corriere di Bologna 2021).

In May 2021, the EMA eventually reported that of the 36 million people who had received the vaccine, only 316 had experienced cases of thrombosis, not all deadly (Reuters 2021); and in February 2022, the AIFA reported that only 22 deaths had been related to all COVID-19 vaccines administered in Italy – 0.2 per million of administered doses (AIFA 2022, 24). Nevertheless, in the period following the first reports of deaths possibly related to AstraZeneca, the reputation of the vaccine had been greatly harmed: within a month, the number of people who considered it safe decreased significantly, and trust in the vaccine fell from 54% to 36% (YouGov 2021b). Italian newspapers reported a refusal of being vaccinated with AstraZeneca (Open 2021); in May 2021, 250,000 doses of the vaccine were reportedly left unused in Sicily, the region where the most deaths allegedly related to the vaccine had been recorded and where the 'incriminated' batch had been distributed (RaiNews 2021b). At the time, Sicily was the last Italian region for COVID-19 vaccinations (GIMBE 2021b); the president of the region commented how "having recorded in Sicily 5 deaths that *according to mass media* could be linked to the effects of AstraZeneca,

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doubts that proved to be unfounded, determined an understandable but unjustified hysteria" (RaiNews 2021b, my translation, emphasis added).

This might have been due to the fact that "the more dramatic the news […] the more the news media will have to exaggerate to capture new interest" (Galtung and Ruge 1965, 86) and compete with other news outlets. Indeed, many articles that reported on deaths allegedly related to the AstraZeneca vaccine were often based on hypotheses instead of facts: it is the case of a death in Biella, reported by newspapers such as La Stampa (Cresci and Mondo 2021); one in Naples, reported by Il Messaggero (2021), La Repubblica (del Porto 2021) and others; or another in Bologna, reported by Il Resto del Carlino (Bianchi 2021). In all those cases, as in many others, any correlation with the AstraZeneca vaccine was contradicted a few weeks later (Corriere della Sera 2021b; Mautone 2021; Tempera 2021). Hedging was often employed in the body of the articles and not in their titles: headlines often employed ambiguous phrasing that implied a non-existent correlation with the vaccine, in an example of clickbait. This occurred even with deaths that were clearly unrelated: in one instance, a month had passed since the injection, which was only reported in the body of the article (Il Mattino 2021); in another, the victim had died from an accident, but the headline included that 'she had just been vaccinated' (Corriere del Mezzogiorno 2021).

It can be inferred that news headlines such as the ones reported above might have heightened the fear of the vaccines' adverse effects in the population, as they instigated a 'witch hunt' against the allegedly incriminated batches and the AstraZeneca vaccine itself; one subsequent headline directly linked the vaccine batch to people's refusal to get the booster shot (Scognamiglio 2021). Moreover, more mistrust might have been created by the use of a vocabulary that framed the deaths allegedly linked to the vaccine as 'crimes': the AstraZeneca batch was 'on trial' for the death of a member of the Italian military (La Sicilia 2021), and public prosecutors – not scientists – were 'investigating' those deaths (Corriere della Sera 2021a). The Italian mainstream media had a responsibility to inform the population of the possible side effects of the vaccine, and to issue updates on the government's reactions. However, the amount of information, the vocabulary most frequently associated to the AstraZeneca vaccine, and the 'high-speed' style of reporting that resulted in publishing information that would soon be contradicted seems to have had a direct impact on the Italian population. While social media have been the most frequently linked with the spread of misinformation (e.g. Cinelli et al. 2020) and 'anti-vaxxer' rhetoric (Center for Countering Digital Hate, 2020), research suggests that mainstream news coverage of the 'AstraZeneca affair' in Italy was even more negative than discussion on social media on the same topic (Reputation Science 2021). Consequently, it became especially relevant to record the effects of this reporting style on the Italian population in as close to real time as possible. The following section will report the results of a survey conducted soon after the events described thus far.

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4. Italian news consumers and the media coverage of COVID-19: a survey

Following the observation of the media environment at the time, I created a survey which asked Italian news consumers to express their preferences in media use and their opinion on how the mainstream media had covered the COVID-19 pandemic. The goal was to observe firsthand:

- the habits and preferences in media consumption of Italians (preferred news outlets, importance attributed to staying informed, trust in the media);
- how much their relationship with the news was influenced by social media (use of social media to access the news, trust the news found specifically on social media);
- if and how the COVID-19 pandemic changed Italians' relationship with the news and mainstream media, especially on the level of news consumption, trust and fatigue.

The survey was conducted in August 2021. At the time, most social distancing regulation had been lifted and all Italian regions were classified at the lowest risk level and with the least limitations (Gagliardi 2021). Although the virus was still circulating, the positive effects of the vaccine could be observed for the first time by a significant part of the population, as nearly 67% of those over 12 years old had received two doses of a COVID-19 vaccine (Marrone 2021). That timeframe was arguably apt to research the effects of media coverage on the pandemic, because while the 'spike' of information about the vaccines' side effects had subsided and most news concerned routine updates on the spread of the virus, the attention towards COVID-19 was still high.

The survey was partly devised on the basis of questions asked by the Reuters Institute's annual reports about digital news consumption (especially Newman et al., 2017, Newman et al., 2020 and Newman et al., 2021); whereas some questions about information overload were adapted from Schmitt et al. (2018). The survey was composed by 71 questions, most of which either had a multiple-choice format or a rating scale format. Some allowed participants to insert their own answer, a feature that was sometimes used by respondents to express their opinion on specific topics, which proved to be particularly interesting. The survey was divided in four sections: demographic information (5 questions); media consumption habits and attitudes in general (28 questions); social media use related to news consumption (20 questions); news consumption habits and attitudes during the COVID-19 pandemic (18 questions). Almost all questions were mandatory (i.e. the platform did not allow respondents to turn in the survey if they had not answered them); since the survey was addressed to Italians, the questions were in Italian.

The survey was conducted on the Google Forms platform; responses were gathered through snowball sampling, until a total number of 300 respondents was reached. Table 4 includes a description of the demographic information of the participants; although the sample was partially skewed, since the majority of the participants were women (71.7%), of an age comprised between 21 and 29 (53.3%),

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and coming from the South (68.3%), the data collected still seems to provide valuable information pertaining to the aims of the present research, especially because, to my knowledge, no similar research focused on news fatigue during the pandemic currently exists. However, given the disparities in the sample, it will not be possible to observe the participants' answers with respect to their age, gender or living place.

Gender	
Female	71.7%
Male	28.0%
Other	0.3%
Age	
<18 – 20 years old	9.0%
21-29	53.3%
30-39	7.3%
40-49	8.3%
50-59	13.7%
60+	8.3%
Area of residence	
North-west	6.0%
North-east	7.3%
Centre	14.6%
South	68.3%
Islands	2.0%
Currently living abroad	1.7%
Highest level of instruction achieved	
Below high school level	1.7%
High school level or equivalent	15.7%
Currently attending a Bachelor's degree	16.0%
Bachelor's degree	31.7%
Master's degree	21.0%
Postgraduate degree (specialisation)	8.7%
PhD	5.3%
Occupation	
Working part-time	16.3%
Working full-time	33.0%
Not currently working, seeking employment	8.7%
Not currently working, not seeking employment	3.0%
Retired	5.0%
Non-working student	34.0%

Table 4. Demographic information

4.1. General media consumption: habits and attitudes

Concerning their media consumption habits in general, most respondents assigned great importance to keeping informed (67.7%), and recognised that 'people have a responsibility to do so' (54.7% 'very strongly agreed' with the statement, and 28% 'strongly agreed'); their main motivation was a sense of social responsibility (71.7%),

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followed by a desire to know what happens in their community (59.7%). A few respondents added their own comments to the question: some underlined the importance of news to "understand what's going on" and "take a stand on social issues"; others expressed doubts over the quality of the news. One commenter stated that while they "don't want to be out of the loop", they "don't believe that information is trustworthy"; another stated that "information is often 'misleading'… anyone affirms anything and its opposite… it's hard to find the truth… those who talk are almost always biased, have personal interests and lack objectivity, whether it's about politics, news or something else"vii.

The most researched topics were current events (68.3%), breaking news (62%), and politics (46%), and people reported being more interested in world news (59.7%) than national (35.7%) and local news (4.7%). Information was mostly accessed through smartphone (92.3%), television (47%) and computer (35.7%); people most frequently came across news through social media (70.7%), then through online newspapers or other news websites (63%) and television newscasts (58.7%). Most people reported checking the news every day (32%) or multiple times a day (26%), while a minority stated that they checked the news only when an interesting event occurred. Conversely, when it came to checking the news specifically from a newspapers' website, most people reported doing so only in case of an important or interesting event (26.7%).

Concerning people's habits when checking the news, most respondents did it 'when they remembered to do so/when they had time' (37%); nearly as many people (36%) reported checking the news at regular times instead, e.g. at lunchtime or after waking up. An important share of respondents (24.7%) only checked the news when they 'came across' an interesting article. When actively looking for news, people mostly relied on multiple news websites (53%) or search engines (48.7%). Only a few people actively relied on print newspapers (7%), and most of the sample never (42.7%) or rarely (34.3%) bought one. Only a few (9.3%) paid for a subscription to a newspaper, either online or in print form.

Most people disagreed with the statement that 'you can trust most news most of the time' (32.3% 'strongly disagree' and 44.3% 'disagree'; only 4.3% agreed with the statement), while 76.3% strongly agreed that 'fake news' are a problem for contemporary society. Perhaps as a result, half of the people in the sample (50.7%) reported always checking the news from trusted sources, no matter the topic; 10%, however, admitted to always relying on the same sources because the abundance of online news confused them. 33% of respondents, on the other hand, mostly relied on search engines to find interesting news. In general, people reported feeling confident in their ability to find relevant information from trustworthy news sources (40.3%, and 27.3% felt 'very confident').

The respondents were fairly balanced in their agreement with the statement 'I do not need to actively search for news, because the news will find me anyway': 38.3% disagreed, 32% were neutral about it, and 'only' 29.6% agreed. Nevertheless, most people reported having partial or no control on when they read the news

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(respectively 58.7% and 23.7%), and coming across the news without looking for them (77.6%); in most of these cases, respondents only read the headline (40.3% 'sometimes', 30% 'often'). Nearly half of the sample (47.7%) fact-checked or followed-up on this news only 'sometimes', but 34% stated doing it 'quite often'.

Most people claimed 'never' or 'rarely' avoiding the news (16.7% and 26.3%); 35% reported doing it 'sometimes'. Those who had done it listed as a reason the fact that the news had a negative effect on their mood (57%) or that they were upset by graphic images contained in news reports (35.4%). Many respondents left a personal comment to this question: some recounted to have avoided news on a specific topic (e.g. war), or because of their source. Some cited as a reason the repetitiveness of the news cycle "especially on television", which made them "more paranoid and bored"; or the amount of "bad things" that happen in the world. One respondent wrote specifically about the pandemic, stating that "in the last year we have been bombarded by the news; mindful, thoughtful, scrupulous journalism is a rarity". Two other respondents mentioned the low quality of journalism as a reason to avoid the news: one said they "cannot stand the rhetoric predominant in many newscasts (especially on television)"; another explicitly avoided "clickbait titles, imprecise or false news".

4.2. News, internet and social media

Social media was the main reason cited for using the internet (63.3%), closely followed by 'staying informed' (58%). The most popular social platform among the respondents at the time was Instagram (66.3%), followed by Facebook (58.3%); most respondents spent a couple of hours (36.7%) or several hours per day on social media (40.7%).

Most people had noticed false information in their online experience (89.3%); nevertheless, most agreed 'somewhat' or 'strongly' with the statement that 'social media contain useful contents that help them stay informed' (respectively 54% and 16%). When it was reformulated into 'social media contain news that can be trusted', however, 43% 'somewhat' disagreed (opposed to 33.3% that still 'somewhat' agreed).

69.7% of respondents appreciated the presence of news in their social media feed. Most people followed an online news outlet (52%) and/or a journalist or expert (58.7%) on social media, which helped them stay informed (respectively according to 68.9% for news outlets and 75.5% for experts and journalists). Additionally, many respondents reported having come across news on social media without following their source directly (e.g. shared by a friend or as sponsored content): 31% of respondents saw them 'sometimes' and 30% 'often'.

Most people (46.3%) reported only reading the headline of an article found on social media 'sometimes', and 26.7% 'often'; 10.7% reported having shared articles on social media without reading them completely.

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4.3. Habits and attitudes towards information consumption during the COVID-19 pandemic

60.7% of respondents declared to have begun checking the news more often during the pandemic; 45.3% had begun following news sources on social media as well, but only 6% had subscribed to a newspaper. The most searched type of news at the time concerned information about the lockdown rules and restrictions (77.3%), scientific information (59.3%), or data on the spread of the pandemic (46.3% about Italy, 42% in general). One respondent commented on this question that they had "found information in general extremely inadequate".

Most people were indeed 'somewhat dissatisfied' or 'more or less satisfied' about the quality of Italian news on the pandemic (respectively 34.7% and 33%); half of the sample (52.7%) found the news as trustworthy as they were before the pandemic, but 35.7% declared to have lost trust in the news. In general, most respondents agreed that the amount of information that circulated (online, on television, etc.) had been excessive (75.7%). 39% of respondents stated that the mainstream media often left them confused about what was happening, and 25.7% found the information provided by mainstream news outlets unsatisfactory; only 24% affirmed that traditional media had helped them understand the pandemic.

88% of respondents reported having seen false information about the pandemic on social media and messaging apps, and 67.3% recalled having seen mainstream news outlets discussing false information.

The majority reported having felt overwhelmed by the news during the pandemic (30% 'sometimes' and 45.3% 'often'); the most commonly cited causes were 'reading conflicting or contradictory information' (59.6%) and 'the amount of news' (48.7%), followed by 'the quality of news' (41.6%). The content of the news, i.e. information about the pandemic itself, was only cited as a reason for feeling overwhelmed by 34.8% of respondents, but one stressed how "the daily bulletin on deaths was tragic, really heavy from a psychological point of view". Most respondents (56%) had decreased the amount of news they consumed since the 'first wave' of the pandemic (March-June 2020, corresponding to the first national lockdown).

Regarding news about the vaccine, most respondents believed that the information provided by the media on the vaccination campaign had been at times contradictory (57%), 'unclear' (14.3%) or 'very unclear' (16.7%). In particular, concerning the AstraZeneca vaccines, 60.3% of respondents believe that the news had discouraged people from getting the vaccine; 56.7% believed that the news had been unclear, and 46.3% that the media had emphasised excessively the adverse effects of the vaccine. A few responders added comments to the question: some stated that "the media [had] often provided misleading information, often full of conjectures, which provoked a sort of demonization of the AstraZeneca vaccine", and that "contradictory news [had] led to disinformation". Interestingly, a couple of comments seemed to go in the opposite direction: one criticised the media for not highlighting enough the risks of the AstraZeneca vaccine, and another claimed that the mainstream media had

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"avoided the diffusion of essential news and documents, such as the vaccine's patient information leaflet". These differences in perception might be due to the effect of the respondents' political leanings (not directly investigated in this survey) on their general attitudes, as the pandemic had become a highly politicised event both in Italy and worldwide (Mitchell and Oliphant 2020; Painter and Qiu 2020)

5. Discussion and conclusion

The present paper presented the results of two parallel studies, which aimed to provide a comprehensive picture of the Italian news media environment during a difficult and chaotic period of our recent history. The collocation analysis performed via MediaCloud was exploratory in nature, and as such, the results should be interpreted with caution; nonetheless, it contributed to confirming the relevance of closely observing current mechanisms of media production and their effect on consumers. In particular, the data collected through the survey appears to be coherent with the global trends observed in relation to: decreased trust in the news; to the apprehension caused by 'fake news'; to the use of social media as one of the preferred ways to access information despite having comparatively low trust in them; and to the fact that nowadays people often encounter information without having to actively look for it. In particular, when asked about the coverage of COVID-19, most respondents reported having felt overwhelmed by the amount of news about the pandemic, in line with existing global studies (Pearman et al. 2021); data concerning Italians' habits when accessing the news, such as reliance on social media and television, and a great confidence in people's own abilities to distinguish reliable information, is in line with reports from CENSIS (2020) and UNSOB (2018).

A limitation of this survey concerns its nature as a self-report study: in some instances participants might have under-reported 'negative' behaviours (for example when asked about negative habits such as only reading headlines or sharing articles they had not read) or over-reported behaviours they perceived as 'positive' (e.g. fact-checking the news). Moreover, since the survey asked respondents to recall events that covered the span of a year and a half, they might not have remembered some of the issues covered by the survey (e.g. if they recalled seeing mainstream media outlets discuss 'fake news').

Notwithstanding the aforementioned limitations, this survey collected relevant data concerning how Italians judged the coverage of the pandemic by the country's mainstream media. In particular, the fact that most respondents considered the amount of news produced during the pandemic as 'excessive' (75.7%); the fact that half of the sample (50.4%) was dissatisfied with the quality of the news about the pandemic; the fact that 39% of respondents were left confused by the news; and the fact that most respondents cited among the reasons for 'news fatigue' contradictory information (59%), the quantity of news (48.7%), and the quality of the news (41.6%) – significantly more than the content of the news, i.e. the pandemic itself (34.8%) – all corroborate the idea that the excessive speed in news production and the use of questionable news production practices such as 'clickbait' or 'churnalism' ultimately

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harm people's trust in the news and their understanding of current events. The fact that respondents independently chose to write comments to underline their disapproval of 'clickbait' headlines and of the overall quality of journalism arguably strengthens this statement.

Further studies on how Italians judge the mainstream media would be worthwhile, especially in the current media environment and in relation to the spread of AI-generated content, making it even harder to recognise 'fake news', and creating anxiety and distrust in consumers (Simon et al. 2025, CENSIS 2025). However, while misuse of AI is a legitimate cause for concern, the role of harmful practices in journalism itself should not be underestimated: trust in mainstream media has barely recovered since COVID-19 (Newman et al. 2025), and current research in psychology has observed the negative impact on mental health of excessive media exposure to careless reporting of events with high traumatic potential, such as the increasingly frequent armed conflicts of the last few years (Regnoli et al. 2025). In the current climate, as the White House's social media shares images of war mixed with video games and memes (Baio 2026), high-quality journalism is needed more than ever.

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[i] For an overview of this multi-layered label see Egelhofer and Lecheler (2019) and Wardle (2019).

[ii] EU Medicines Agency (@EMA_News). "Misinformation is making the rounds today. This is the situation: Benefit/risk balance of AstraZeneca #COVID19 vaccine is positive and it remains authorised for all populations.", Twitter/X, June 13, 2021, 3:45 PM, https://x.com/EMA_News/status/1404072431766151172.

[iii] Available at https://www.mediacloud.org/.

[iv] The complete list of media sources included in the 'Italy – National' collection can be found at: https://search.mediacloud.org/collections/34412372.

[v] This refers to the code of one of the AstraZeneca batches that was tracked by the news due to its alleged connection to the thrombosis cases.

[vi] The advanced research carried out on the Nexis Uni database of Italian news produced between March 7 and April 7 2021 (by searching the Italian word for 'batch' in headlines only, and the word 'AstraZeneca' anywhere in the body of the article) produced 226 results; however, the database does not include all Italian newspapers (e.g. La Repubblica, one of the most read newspapers both online and in print, does not appear in Nexis Uni). It is thus possible to infer that there were far more headlines referencing the AstraZeneca batches.

[vii] All comments written by respondents were originally in Italian and have been translated verbatim.

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