Moral panic on the AstraZeneca vaccine in Italy: textual analysis of newspaper headlines

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1. Introduction

On February 6, 2021, the arrival of the first 249,600 doses of the AstraZeneca vaccine in Italy marked a significant acceleration in the country's immunisation efforts, bringing the prospect of an end to the Covid-19 pandemic closer for Italian citizens. Nevertheless, a month after these encouraging breakthroughs, people's hopes drastically faded when online newspapers started reporting cases of blood clots in patients who had previously received their first dose of the AstraZeneca vaccine[1]. As this news story began to circulate, European countries made varying decisions in an effort to prevent the spread of moral panic: "A mass movement based on the false or exaggerated perception that some cultural behaviour or group of people is dangerously deviant and poses a threat to society's values and interests. Moral panics are generally fuelled by media coverage of social issues" (Gooch & Williams, 2007; see also Thompson, 1998). While Denmark, Norway, and Iceland announced a two-week stop of the AstraZeneca vaccine so as to allow the European Medicine Agency (EMA) to check on the possible connection between the vaccine and this side-effect, the Italian Medicine Agency (AIFA) only discontinued the ABV2856 batch while continuing to administer AstraZeneca doses, on the basis that the cases of blood cloths and suspicious deaths had never occurred. Although other EU states adopted a similar approach, news reporting in Italy raised concerns about the safety of this vaccine. Moreover, doubts on its benefits were supported by the fact that some patients who tested positive for Covid-19 had few or no severe symptoms. In this manner, anti-vaxxers' theories gained consensus and the fear of being vaccinated abruptly supplanted the fear of the virus. Although neophobia characterises human beings, trying to provide explanations to the way newspapers contributed to the spread of moral panic among Italian citizens is the purpose of this article. Online newspapers were the main medium through which Italian people informed themselves on the on-going pandemic and the vaccination campaign as a result of digitalisation and Covid restrictions. Social media also had a pivotal role in providing citizens with useful information on this topic; however, in order to avoid shallow generalisations and underline the intrinsic peculiari-

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[1] Despite its changing name, AstraZeneca will be preferred to Vaxzevria since it was the only available name for this vaccine in the analysed timespan.

ties of the language of newspapers, this study only investigates the way online news discourse shaped reality and information during the second week of March (8th-14th March 2021). The choice of the selected time span stems from the large amount of news articles reporting cases of blood clot and discussing the uncertainty shown by EU States on the topic. In order to conduct research via a qualitative approach, this study scrutinised fifty of those articles by resorting to Systemic Functional Linguistics (SFL henceforth) and Critical Discourse Studies (CDS henceforth) tenets with the intent of investigating the way online newspaper articles influenced the spread of moral panic on the AstraZeneca vaccine in Italy through sensational and catchy headlines. This research thus grounds its methodology at the intersection of media communication and discourse analysis, with the principles of the latter enabling the uncovering and examination of the underlying features of the former. If news discourse shapes reality influencing people's mind (see Richardson, 2007), merely blaming newspapers for the spread of this moral panic may also be simplistic. This research thus devotes the next section to both the language of newspaper and news agencies, intertwining the three concepts of language, journalism, and society.

2. News Discourse: the industry and the language of newspapers

In the context of journalism, it is essential to distinguish between print and online newspapers due to the substantial changes that the Internet has induced in relation to news creators, news sources, the proliferation of fake news, circulation and readership, as well as advertising. Despite these breakthroughs, a concise description of journalism and journalists' obligations and duties is required so as to achieve a better understanding of the general domain under scrutiny and its peculiarities. Quoting Hall (1978: 53), "news is the end-product of a complex process which begins with a systematic sorting and selecting of events and topics according to a socially constructed set of categories". Therefore, any research that aims at scrutinising news discourse must take into account the entire process of news creation in which news agencies, societal constrictions, and journalists cooperate (see Bednarek & Caple, 2018), as merely focusing on the final product might lead to partial and reductive results. In other words, considering newspapers and journalists as the sole involved actors in the creation of headlines may have prevented this research from gaining deeper insights into the rationale of moral panic. According to Hall (1980), a successful analysis of the discursive practices of journalistic discourse seems to deviate from his model of encoding and decoding of media texts, since producer and receiver are not the only actors of journalism. Indeed, the process of news creation is complex, influenced by various professional policies and individual decisions that shape journalistic practice. Furthermore, Belsey and Chadwick (1992: 1) sustained that "journalism remains an honourable profession, because it has an honourable aim, the circulation of information". This, however, only applies to ethical journalism, which can be described as "the study of the grounds and principles for right and wrong human behaviour" (Sanders, 2003: 15). Harcup (2002: 103), instead, states

that journalists experience a dichotomic workplace in which they must apply "professional commitment to ethics and truth telling while at the same time being expendable employees expected to produce whatever stories are demanded in the market-place". It can be inferred, therefore, that when news discourse is scrutinised, journalists cannot be considered the sole producers of news article; news agencies, advertising companies, constraining stylistic rules, and societies above all, massively contribute to the creation of newspaper articles. Nevertheless, journalists may hold a crucial role in the newspaper industry and distance themselves from differing ideological standpoints by exploiting the linguistic style employed. As Cameron (1996: 315-316) underlined:

> styles policies […] are ideological themselves. Though they are framed as purely functional or aesthetic judgments, and the commonest criteria offered are "apolitical" ones such as clarity, brevity, consistency, liveliness and vigour, […] it turns out that these stylistic values are not timeliness and neutral, but have a history and a politics. They play a role in constructing a relationship with a specific imagined audience, and also in sustaining a particular ideology of newspaper reporting.

Research, therefore, cannot solely rely on textual analysis when examining news headlines, but it should embrace an all-encompassing perspective on society. In this sense, CDS tenets are able to unveil underlining ideologies and contribute to addressing social issues such as moral panic. Given its specificities (presented in §3), CDS serves as the ideal approach to facilitate reflection on texts within their broader social, cultural, and political contexts.

After this brief overview on some of the crucial aspects of journalism, it is essential to delve into the differences between its offline and online form (on which this study focuses), so as to also describe the traditional approach, highlight the alterations generated by technological advancements, and consider contemporary journalistic specificities when tackling this domain from a research perspective. Despite this transition section may seem irrelevant to the purposes of the present study, contextual information on past and present news creation was deemed beneficial to further highlight the way through which moral panic can spread through modern-day journalism.

Firstly, the production of news has undergone significant transformation. Recognising that news is inherently second-hand, journalists must continually interpret and elaborate on primary news sources, irrespective of the communication medium utilised. Sources in written and online journalism vary significantly; while printed articles typically draw information from interviews, press releases, or wire services, online articles often incorporate user-generated content, which may be authored by individuals with varying levels of expertise[2]. In this matter, primary sources can range from official and

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[2] This is not to suggest that online journalism is less rigorous than its offline counterpart, but rather to highlight that anyone with Internet access can create and disseminate news, potentially leading to the spread of fake news and moral panic.

governmental website to forums, word of mouth, and personal experiences, which could lead to the spread of fake news.

Secondly, newspapers' circulation and audience vary according to the medium. While print newspapers usually target a specific audience by selecting and formatting articles according to their interests, online newspapers are characterised by audience fragmentation, which has triggered an increase in the number of available media options. This fragmentation has resulted in diminished subsidies for both print and online newspapers from advertisers, who are generally reluctant to support companies with reduced readership. This reflects the current online newspapers' preference for catchy articles in order to attract a greater number of readers, but "when journalism becomes simply another 'media product', manufactured according to the bottom line, it leaves little room for ethics, professionalism, objectivity and the things that constitute journalism" (Richardson, 2007: 79). Consequently, the substantial readership of online newspapers may be characterised as a form of complete digital colonisation; however, this phenomenon has not resulted in an improvement in the quality of published materials, as will be demonstrated in §5.

2.1 *The language of offline and online newspapers*

Richardson (2007) articulated that language, including the language of journalism, serves five primary purposes. He asserted that language is social, active, political, and capable of enacting identity and wielding power. To achieve the intended objectives, it is beneficial to concentrate on two of its defining qualities: its active nature and its power.

Language is active through linguistic realisations, such as performative verbs, which directly enact the actions they describe, as well as through journalistic practices, in which words and sentences are used to inform citizens about the most relevant and current events. It is important to emphasise, however, that whether an event is deemed noteworthy is contingent upon an individual scale of newsworthiness; consequently, the process of news creation is inherently biased.

The property of power is emphasised in news discourse. As Richardson (2007: 13) claimed:

> Journalism has social effects: through its power to shape issue agendas and public discourse, it can reinforce beliefs; it can shape people's opinions not only of the world but also of their place and role in the world; or, if not shape your opinions on a particular matter, it can at the very least influence what you have opinions on; in sum, it can help shape social reality by shaping our views of social reality.

When newspaper articles about the AstraZeneca vaccine circulated in Italy during the second week of March, public opinion was significantly shaped by the selected words and images. While online newspapers endeavoured to inform Italian citizens about the potential side effects of the AstraZeneca vaccine, the way they presented this informa-

tion also influenced public perceptions and shaped the social reality surrounding the vaccination campaign.

Maria Grazia Busà (2013) identified five components in news articles: headline, byline, caption, lead, and body copy[3]. The same sections are present in online news, which can incorporate additional elements due to the possibilities provided by the web. Online articles, for example, can replace photographs with videos; however, a caption describing the frames will always be included. As this study centers on headlines, this item is explored in greater detail hereafter.

Headlines' most important characteristic is their highly synthetic language. This usually results in determiners and auxiliary verbs omission, creating a highly lexical language characterised by complex noun groups and nominalisation processes. Two types of headlines can be pinpointed: witty headlines and informative headlines (see Busà, 2013). While the first engages readers' interest and intellect through linguistic, stylistic, and rhetorical strategies, the second emphasises the presentation of information and the description of events. Moreover, print newspapers tend to prioritise witty headlines, whereas online newspapers favour informative headlines. This preference is attributed to various factors. Firstly, the use of straightforward and clear language, rather than relying on puns and metaphors, enables online users to easily retrieve and comprehend online news. Secondly, this type of headline is particularly used to convey tragic stories, where clear and objective language is favoured over connotative expressions. Indeed, the majority of the collected online articles are characterised by informative headlines and a rich lexical language, as demonstrated in the corpus section. Analysing article headlines from a textual perspective serves as the foundation of this research, aiming to understand how they contributed to the construction of a narrative that led to the spread of moral panic regarding the Covid-19 vaccination campaign in Italy. This complex relationship between vaccine communication and news headlines arises from two specific factors. Firstly, Covid-19 pandemic heavily contributed to the increase of online news readers due to the restrictions on personal freedom that prevented citizens from obtaining information from offline sources. Secondly, news sensationalisation[4] was bolstered by the inaccessibility of the text body (unless a membership fee was paid), which limited readers knowledge to headline information. This study thus aims to uncover the specific linguistic peculiarities that might have supported this spread of moral panic on the immunisation drive in Italy during the second week of March, a time when online news and its respective headlines gained more prominence in the plethora of communication means. The foundational rationale for adopting a textual perspective in this study, the reasons for considering it an essential initial step in investigating the topic, and the theoretical frameworks that underpin this research are outlined in the following paragraph.

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[3] The headline is the title of the article, the byline provides readers with the author's name, the caption usually consists in a describing sentence, the lead is an introductory paragraph that states all the main facts, and the body copy represents the actual article.

[4] Presenting information, especially news, in a way that provokes public interest or excitement at the expense of accuracy or balanced reporting.

3. Theoretical Frameworks and Methodologies

This study positions itself within the extensive body of research on news reporting and the corresponding headlines related to the Covid-19 pandemic (see Aslam, Awan, Syed, Kashif, & Parveen, 2020; Luengo & García-Marín, 2020; Pavlik, 2021; Perreault M.F. & Perreault G.P., 2021; Yu, Zhong, Li, & Xu, 2020[5]), to which it seeks to contribute by providing a country-specific perspective focused on the Italian context. In terms of methodological approaches, this study utilises SFL and its adaptation for visual analysis, as well as CDS. Their key aspects are succinctly outlined below.

In 1961, Michael Halliday developed his SFL theory, diverging from the structuralist approach *à la Saussure*. Influenced by sociolinguistics, Halliday emphasised the study of language in terms of its functions rather than its formal structure. Rather than analysing the internal levels of language – such as phonetics, morphology, syntax, semantics, and pragmatics – he views language as a purposeful system, focusing on its effects and outcomes in the material world. As a result, Halliday placed significant emphasis on the concept of context, arguing that languages and texts cannot be analysed in isolation. Instead, he maintained that they both shape and are shaped by the context in which they occur. According to Malinowski (1923, 1935), there are two types of contexts that should be perceived as two different extra-linguistics levels: the context of situation and the context of culture. While the first refers to the social and situational environment in which a text unfolds, the second pertains to the shared meanings and assumptions within a community and incorporates "the culturally evolved expectations of ways of behaving and getting things done" (Hammond *et al.*, 1992: 2), encompassing both the text and the context of situation. The latter can be further analysed through the three parameters of Field, Tenor, and Mode, which allow speakers to anticipate the language appropriate to a given situation. The first parameter refers to the topics and contents of a text; the second encompasses the participants and their relationships; the third relates to the channel of communication. Three metafunctions, which according to Halliday shape and organise every language, are connected to these parameters: the ideational function, the interpersonal function, and the textual function.

> The first organizes the resources we use when we construe our experience of both the inner and the external world; it represents the world around and inside us. The second refers to the interaction between the producer and the receiver of a text; it enacts social relations. The third is the component that enables the speaker to organize what he is saying in such a way that it makes sense in the context and fulfils its function as a message. (Halliday, 1973: 66)

Furthermore, in Halliday's model the three metafunctions are realised at clause level through transitivity, mood and modality, and theme structure, respectively. This study solely focuses on the textual metafunction, examining the thematic structure of selected

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[5] An exhaustive review of all research conducted on this topic falls outside the scope of this paper. Instead, the studies referenced here are those most relevant and pertinent to the current discussion.

headlines and seeking to extend the concept of theme and rheme (see Wang; Zha, 2019) to a broader discursive level.

Transitioning from the linguistic to the visual domain and identifying parallels between these two semiotic resources, Kress and van Leeuwen (2006) adapted the same metafunctions for image analysis, establishing the representational, interactive, and compositional metafunctions. As this study briefly addresses the topic of multimodality, given the presence of images alongside newspaper headlines, it is important to introduce the compositional metafunction[6]. In Kress and van Leeuwen's model (2006), the compositional metafunction parallels the textual metafunction in Halliday's SFL and pertains to the arrangement of information within an image. It can be analysed through: Information Value, which relates to the positioning of elements within the image; Visual Salience, referring to the characteristic that makes certain items more prominent; and Visual Framing, which describes how elements are interconnected within an image.

Given that, as previously noted, a textual approach cannot adequately capture the functioning of news discourse, it is important to elucidate the reasons that motivated its choice for this research. From an SFL perspective, it can be maintained that texts "simultaneously represent aspects of the world (the physical world, the social world, the mental world); enact social relations between participants in social events and the attitudes, and values of the participants; and coherently and cohesively connect parts of texts together" (Fairclough, 2003: 27). Consequently, texts simultaneously serve all three metafunctions (ideational, interpersonal, and textual). However, to facilitate a more in-depth investigation, this study will concentrate exclusively on textual analysis, which "involves the analysis of the way propositions are structured and the way propositions are combined and sequenced" (Richardson, 2007: 38). In addition, textual analysis

> […] covers traditional forms of linguistics analysis – analysis of vocabulary and semantics, the grammar of sentences and smaller units, and the sound system ('phonology') and writing system. But it also includes analysis of textual organisation above the sentence, including the ways in which sentences are connected together ('cohesion') and things like the organisation of turn-taking in interviews or the overall structure of a newspaper article. (Fairclough, 1995: 57)

Fairclough (1995: 104) also noted that two levels of text should be taken into account during the analysis, "the first has to do with the structuring of propositions, the second with the combination and sequencing of propositions. Both levels are addressed in this article, as it simultaneously analyses the structure of individual headlines and the broader discourse they generate, which is supported through intertextual connections. While textual analysis may appear to be capable of analysing news discourse, "Content analysis is one form of textual analysis that, when applied as the sole research method, is an analytically inadequate way to examine the role that journalism plays in maintaining and/or transforming social inequalities" (Richardson, 2007: 38). CDS were thus

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[6] Describing the entire model is beyond the scope of the present article.

employed in conjunction with textual analysis to enhance the understanding of encoding and decoding practices, alongside an examination of the production, consumption, and effects of the texts under investigation. The main feature of CDS that this study embraces "include an emphasis on the study of language in light of social and historical context, and the way that any linguistics structure can carry ideological significance" (Fowler, 1991: 67). This research, therefore, incorporates both a textual and a critical approach to the analysis of news discourse, as the omission of either would hinder the ability to present comprehensive and meaningful results.

4. Corpus creation process and results

Fifty[7] newspaper articles were used to compile the corpus of this research. Since social turmoil concerning the AstraZeneca vaccine emerged during the second week of March, following reports of blood clots in patients who had been vaccinated in the preceding days, this research exclusively focuses on the most relevant[8] online articles published from 8th to 14th March 2021. The corpus creation process started by entering the word *AstraZeneca* on Google and clicking on the "Notizie" [News] section to ensure that only news articles were retrieved. As the setting options allow to select specific dates, the pre-mentioned date range was selected. A qualitative approach was subsequently employed to manually sort the displayed articles and refine the corpus from irrelevant and off-topic news. After selecting the fifty articles, their headlines were inputted, categorised, and analysed using a spreadsheet program, as illustrated in the image below.

Figure n. 1 – *Example of an analysed headline*

Headline	Vaccino covid, Aifa dispone stop in Italia per lotto AstraZeneca: "Segnalati eventi avversi gravi in concomitanza con la somministrazione"
Thematic Structure	Theme/Rheme (Marked theme)
Information Structure	Given/New
Text Availability	Available
Multimodal resources	Unknown vaccine doses
Additional Information	

As illustrated in Figure n. 1, six categories were established to conduct a textual analysis of the obtained headlines: headlines, thematic structure, information structure, text availability, multimodal resources, and additional information. A brief description of each is provided hereafter.

The first row (Headline) merely reports the article headlines.

The second row (Thematic Structure) highlights theme and rheme in the investigated headlines and signals the employment of a marked or an unmarked theme. If the headline was made of more than one sentence, the same process was repeated.

The third row (Information Structure) underlines given and new information in the chosen headlines.

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[7] This inductive approach was determined by the pertinence and salience of the articles.
[8] According to the analytics of the employed search engine.

The fourth row (Text Availability) indicates whether the articles were freely available to internet users or if a paid membership was demanded in order to read the full article.

The fifth row (Multimodal resources) indicates the presence of images and videos accompanying the headlines and verbally describes them. When referring to videos, it simply indicates their presence.

The sixth row (Additional Information) contains relevant linguistic comments on the headlines.

Moreover, colours were used to provide linguistic information and add useful details. Given that theme and given information usually overlap, the colour red was used to highlight them in the headlines. Conversely, since rheme usually contains new information, green was used to mark them. Nevertheless, although Figure 1 illustrates an instance in which this linguistic pattern is respected, certain sentences may diverge from it. In fact, some headlines in the corpus did not comply with this rule, emphasising specific aspects while downplaying others. While this pattern was present in 90% of cases (54 sentences), 6 sentences (10%) did not feature it. Likewise, colours were also used to highlight items in the Multimodal Resources row, categorising the images supporting the headlines in ten macro-categories according to their main visual elements: Vaccine or logo (11); Hand holding a dose (8); Doctor (7); Video (6); People (6); Injection (4); Unavailable or absent (3); Building (2); Died people (2), and Written documents (1). The categories were arranged in descending order of frequency, indicating that while the majority of images depicted a dose of the AstraZeneca vaccine, only a few showcased written documents, as indicated by the numbers in brackets. Notwithstanding the fact that only fifty headlines were considered, the total number of analysed sentences is sixty, as few headlines consisted of more than one sentence. Following Halliday's perspective (2004), it is essential to stress this detail as this research uses the clause as main level of analysis. While forty-two headlines were composed of one sentence, six showcased two propositions, and only two displayed three separate sentences. In terms of percentages, 70% of headlines displayed one sentence, 20% featured two, and 10% showcased three. Marked themes was present in 78,3% of sentences, which corresponds to forty-seven occurrences, while unmarked themes were found in 13 sentences, 21,6% of the total. Eight of the fifty articles cannot be accessed by internet users without subscribing to a paid membership, which means that 16% of them cannot be accessed by the general public, who is thus only allowed to read the headlines. As the only visible item for some articles and considering their linguistic construction, headlines may have cooperated in the spread of moral panic, as will be discussed in the following paragraph. Ten sentences characterised the headlines of the eight unavailable articles; while six of them were composed of one sentence, two of them featured two sentences. Furthermore, eight of them were characterised by a marked theme (80%), while only two sentences preferred an unmarked theme (20%). The example below represents the headline of an unavailable article showcasing a Marked Theme: "Astrazeneca, Rezza: 'Ministero della Salute invierà ispettori'. Sequestri Nas del lotto bloccato da Aifa" [AstraZeneca, Rezza: 'The Ministry

of Health is sending inspectors'. The Nas police seies the discontinued batch designated by the Aifa].

5. Textual, discourse, and multimodal analyses

The analysis section is organised as follows: it begins with the textual and discourse analyses of the selected headlines, followed by a multimodal approach in paragraph 5.1, which examines the visual resources that accompanied some of the headlines, before concluding with the final remarks.

Prior to presenting the first analysis section, it is important to elucidate the factors that motivated online newspapers to publish numerous articles regarding the controversies surrounding the AstraZeneca vaccine, rather than leveraging their communicative power to support the vaccination campaign. As previously noted, it is important to distinguish between events and news. While events can be reported as news, not all events can be covered by news, indicating that journalists – and the industry as a whole – exercise power in the process of news selection. This selection is typically influenced by specific news values, which in turn assist in determining the newsworthiness of events. Although many scholars and researchers have attempted to enumerate the criteria that influence journalists' decisions (see Galtung & Ruge, 1965), the most relevant aspect of news values is that they "[…] are meant to be the distillation of what an identified audience is interested in reading or watching […]" (Richardson, 2007: 91). Unlike print newspapers, online newspapers do not usually have a fixed and loyal audience. As a result, by sensationalising distressing news and downplaying the positive outcomes of the vaccination campaign, online newspapers prioritised their economic interests. In other words, since prioritising positive news would not have garnered the same readership or revenue, online newspapers emphasised their capitalistic interests. This is confirmed by the fact that journalistic meaning, ideology. and ethics are not exclusively conveyed via official articles but also through unpublished news. Despite the simplicity of the previous assertion, as contemporary journalism operates as a fully-fledged business, it is essential to acknowledge that "when the work of journalism emphasises entertainment, or the activities and opinions of the powerful, or the pursuit of profit in themselves or above the primary function of journalism – to help citizens to understand the world and their positions within it – it stops being journalism" (Richardson, 2007: 8). During the period under examination, this point – along with the significance of headlines in news discourse – was demonstrated by the republication of the same unaltered news by the same online newspapers within a span of five minutes, accompanied by only a slight modification in the headline. 'Militare morto: Ad Astrazeneca indagato da Pm Siracusa' [Serviceman found dead: the CEO of AstraZeneca is being investigated by the public prosecutor's office in Siracusa], which became 'Militare morto: Ad di Astrazeneca indagato da Pm Siracusa', in which only the preposition *di* differentiates the two headlines. This strategy may have been implemented to boost readership and generate higher profits, without considering the potential consequences of such actions. However, this mere-

ly serves as the foundation for the current investigation, as "detecting that newspapers are businesses should only ever be the starting point of analysis" (Richardson, 2007: 7).

As noted in the results section, while most headlines adhered to the conventional pattern of theme/given and rheme/new, some featured a marked theme. In sentences characterised by an unmarked theme, the subject occupies the thematic position; in contrast, marked theme sentences include other elements, such as objects or adjuncts, in the thematic position. In the present research, 78,3% of the analysed sentences presented a marked theme, which was usually realised through the placement of words and phrases such as *AstraZeneca*, *Vaccino AstraZeneca* [*AstraZeneca vaccine*], *Caso AstraZeneca* [*the AstraZeneca case*] in initial position. Although this characteristic may define news discourse, which typically presents information in a brief and concise manner, it is important to note that the subjects of these sentences often differed from the preferred anaphoric element (the AstraZeneca vaccine). Moreover, given that all headlines contained negative information, the anxiety and panic on this vaccine among the public were not unfounded. A notable characteristic of the analysed newspaper headlines is the use of the term *AstraZeneca* and other synonymous or related phrases as marked theme, thereby assigning the subject position to a less newsworthy element. Furthermore, when considering the highly lexical nature of news discourse, characterised by the predominance of nominalisation and complex noun groups over verbs, the absence of a subject, coupled with a high frequency of impersonal verbs in most headlines, reinforces this effect. As can be seen in the following sentence 'AstraZeneca: in Croazia si indaga sulla morte di una donna' [AstraZeneca: investigations in Croatia for a woman's death], the name *AstraZeneca* is used as marked theme, no subject can be detected, an impersonal verb is featured, and the general topic of the sentence is not directly related to the element used as marked theme. Similarly, while anaphorically placing *AstraZeneca* or related terms at the beginning of sentences, most headlines fail to specify that investigations (*si indaga*), and seizures as in 'AstraZeneca: sequestri Nas in Sardegna, 3.700 dosi inoculate' [AstraZeneca: Nas seizures in Sardinia, 3.000 injections] only refer to one batch of this vaccine. This lack of clarity, whether intentional or not, may have contributed to the spread of moral panic among the Italian population, particularly when considering the volatility of online news and the rapid pace dictated by Web 2.0. This is further exacerbated by the anxiety of being constantly updated on the latest news in today's hyper-technological and ultra-connected world, which may compel internet users to restrict their reading to news headlines. This tendency can lead to misinterpretations of the news due to the linguistic design of the headlines. While certain predetermined stylistic and linguistic constraints may limit journalists' freedom in headline creation, and despite the pervasive influence of consumerism in contemporary journalism, professional journalists should prioritise the ethical responsibilities inherent in their profession.

Another linguistic feature that characterised the analysed headlines is the use of reported speech. Richardson (2007) identified five methods through which journalism can utilise reported speech: direct quotation, strategic quotation, indirect quotation, transformed indirect quotation, and ostensible direct quotation. In the selected articles,

only the first two strategies (direct quotation and strategic quotation) were employed by journalists. By way of illustration, two examples are reported below: 'Astrazeneca, Rezza: 'Ministero della Salute invierà ispettori'. Sequestri Nas del lotto bloccato da Aifa', [AstraZeneca, Rezza: 'The Ministry of Health is sending inspectors'. The Nas police seizes the discontinued batch designated by the Aifa]; 'Effetti collaterali per AstraZeneca, la Danimarca sospende l'uso del vaccino: 'Coagulazione nei pazienti' [Side effects for AstraZeneca, Denmark discontinues the vaccine: 'Blood clots found in patients']. Direct quotations are generally introduced by a reporting clause and are enclosed in quotation marks within the text, as illustrated in the first example. Although they seem to truthfully report statements, "the reader's interpretation of the quotation and the source responsible is inevitably framed by the reporting clause that the reporter chooses to employ" (Richardson, 2007: 102). Despite the lack of a reporting clause in the first Italian sentence, the headline still remains connoted for the way journalism conceives objectivity. As is well known, journalists are expected to maintain objectivity when writing articles and refrain from including personal comments or opinions; however, value judgments can still be incorporated into the articles but "it requires that the fact and opinion in a news report needs to be that of people other than the journalist" (Richardson, 2007: 86). By resorting to this strategy, the presented headline managed to remain journalistically objective while simultaneously introducing values, judgments, and viewpoints. Even choosing whose or which words to report is value-laden per se. The second headline, on the other hand, utilised a strategic quotation to report words without specifying a reporting clause or a subject. Given that this is the most frequently employed type of reported speech in the current corpus and that strategic quotations are also referred to as "scare quotes", the negative impact of these headlines on the Italian audience is further underscored. Highlighting alarming quotes through typographical resources without identifying the speaker can understandably provoke anxiety and distress in readers. When this is combined with the use of passive sentences in which no agent is identifiable, the reasons behind the emergence of moral panic in Italy during the second week of March 2021 become more evident. 'Vaccini Covid, sequestrate 50 fiale di AstraZeneca in Friuli Venezia Giulia: ecco cosa sappiamo' [Covid Vaccines, 50 AstraZeneca phials have been seized in Friuli-Venezia Giulia: here's what we know]; this sentence exemplifies the way online newspapers presented information to the Italian public. After reading scare quotes with no specification on their utterers and passive sentences where no agent could be held accountable for the circumstances surrounding the AstraZeneca vaccine, becoming scared and skeptical about the vaccination campaign could almost be considered a direct consequence. This point is further reinforced by the presence of unavailable articles, which constitute 16% of the corpus. In this way, alarming headlines became the only section accessible to Italian readers, thereby hindering their ability to read the complete articles and develop a more nuanced opinion on the topic.

A smaller proportion of headlines (10%) exhibited a given/new information inversion, in which the given information of the theme was linked to the rheme, while the

new information of the rheme was associated with the theme. As a general principle, the theme usually contains given information while the rheme presents new information. Therefore, when this pattern is not adhered to, it is important to examine the underlying reasons. In the following example, 'Anche Romania e Bulgaria sospendono l'uso del vaccino AstraZeneca' [Even Romania and Bulgaria discontinue the AstraZeneca vaccine], although the first part of the sentence still occupies a thematic position, it unusually conveys new information, relegating the given information to the rheme. This is also corroborated by the use of the conjunction *anche* [*even*], which signals that additional information is being added to readers' knowledge on the subject. This fosters a narrative connection between articles and generates renewed interest among the audience. While Franklin *et al.* (2005: 327) describe a running story as news that engenders "further developments or fresh revelations, media coverage over a period of days, months or even years", Richardson (2007) claims that "the existence of this textual chain is revealed in the use of discourse markers such 'another', 'further', 'additional' and modifiers such as 'new'", describing it as external intertextuality. Moreover, in Blommaert's words (1999: 5), "every text incorporates, reformulates, reinterprets or re-reads previous text, every act of communication is grounded in semantic and pragmatic histories which are not simple and linear, but complex, multi-layered and fragmented". Following his perspective, the extensive use of marked theme and reported speech discussed in the previous paragraph can be described as internal intertextuality, considering that "all texts consist of, or are composed from, fragments or elements of previous texts" (Richardson, 2007: 101) and that "prior texts reside in present texts" (Leitch, 1983). Therefore, these three features (marked theme, reported speech, and given/new information inversion) allowed the analysed headlines to create linguistic and conceptual connections between the articles and enabled online news companies to generate profit by perpetuating an ongoing narrative. However, this objective was concealed behind the ostensibly benevolent aim of keeping readers informed about the vaccination campaign and the AstraZeneca vaccine.

Two additional features conclude the textual and discourse analysis. If the concept of a running story is embraced, an alternative approach to Information Structure may be adopted. In his SFL theory, Halliday (1973) identified the clause as the primary level of analysis. However, when examining how newspaper articles generate meaning, it may be advantageous to adopt an approach that shifts focus from the clause to the discourse level. This is feasible because both Italian and English are subject-prominent languages, in which the syntax does not distinctly separate the topic from the comment. Conversely, Japanese, and Korean were described by Charles N. Li and Sandra Thompson (1976) as topic-prominent languages, in which specific morphemes or syntactic phenomena accurately split the topic from the comment. In order to exemplify this point, the following headline is taken as exemple: 'Morto docente a Biella, Piemonte sospende AstraZeneca per accertamenti sul lotto coinvolto' [A teacher died in Biella, Piedmont discontinues AstraZeneca to carry out background checks on the incriminated batch]. Despite this headline could be considered as made of two different sentences connected by a causative link, in Halliday's perspective (1973) this sentence is characterised by a thematic

first part, which provides given information and showcases a marked theme, and a second part that has the typical rhematic role of supplying new information. Nevertheless, if the way newspaper headlines present information is considered and their ability of creating a storytelling is accepted, it would be challenging for unsuspecting readers to consider the first part of the sentence as given information. The entire sentence can thus be perceived as new information, while given information may be found in the accompanying text, where online users can access additional details and retrace the narrative. The significance of having access to full articles thus becomes evident, particularly when considering the overly generic information provided by the analysed headlines and the potential for misinformation and misunderstanding that this approach to journalism can engender. In fact, rather than specifying which batch had been discontinued in Italy, most headlines simply referred to a generic batch: 'Astrazeneca, in Campania stop a due lotti vaccini' [AstraZeneca, two batch discontinued in Campania]. Only one headline specified that authorities were discontinuing batches solely as a precautionary measure: 'Vaccino Astrazeneca, la Toscana ritira alcune dosi di un lotto 'in via precauzionale' [AstraZeneca vaccine, Tuscany discontinues some doses of a batch as a 'precautionary measure'].

5.1 *Multimodal analysis*

The last section of this article is devoted to multimodality, as most of the analysed headlines were accompanied by one or more images that significantly contributed to the meaning-making process and served as the most salient visual items for ergodists[9] (see Chiew, 2004). Since a comprehensive multimodal analysis exceeds the scope of the present article, this section only addresses two points related to the compositional metafunction and one additional detail.

Firstly, the headline 'Lotto Astrazeneca sospeso dall'Aifa: dosi somministrate anche a Macerata 'Abbiamo paura, non sappiamo che fare' [The Aifa discontinues an AstraZeneca batch: few doses have been administered also in Macerata 'We're scared, we don't know what to do'] features a scare quote that was also highlighted in red. Following Kress and van Leeuwen's perspective (2006), this colour choice exploits Visual Salience, which enables creators to either draw attention to or detract focus from a particular item. Further on this point,

> Colour is also used to convey "interpersonal meaning". Just as language allows us to realize speech acts, so colour allows us to realize "colour acts". It can be and is used to do things to or for each other, e.g. to impress or intimidate through "power dressing", to warn against obstructions and other hazards by painting them orange, or even to subdue people. (Kress & van Leeuwen, 2002: 343-368)

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[9] People interacting with Internet pages.

In this manner, the journalist enhanced the impact of a scare quote (which already captures readers' attention thorugh its typographical features) by employing red as an attention-grabbing device. From a semiotic perspective, given the alarming connotations associated with the colour red in the Italian and most of the Western contexts, the journalist deliberately selected it to amplify the frightening implications of the scare quote.

Secondly, the way images and their internal elements are positioned is not objective; Kress and van Leeuwen (2006) labelled this property Information Value. Following Halliday's theory (1973), they stated that elements within images can similarly convey given and new information through their positioning in the left or right sections of the images. Two examples are reported hereafter to underline the way journalists decided to multimodally present news articles; in both cases two images were used. Alongside the headline, an image of an AstraZeneca dose and a photo of Stefano Paternò (a man who died after receiving his first AstraZeneca dose) compositionally succeed one another. By being positioned on the left side, the image of the AstraZeneca dose conveyed given information, whereas the photograph of Stefano Paternò presented new information. Following Kress and van Leeuwen perspective (2006), The two images exhibit a cause-and-effect relationship that links the man's death to the vaccine, sharply contrasting with the assertions made by competent authorities at that time. Although a correlation between the two events was established months later, this premature conclusion may have significantly contributed to the widespread moral panic surrounding the vaccine. Similarly, a second article placed the photos of two men who died after an AstraZeneca injection in succession, complementing them with a headline stating: 'Secondo decesso sospetto dopo dose AstraZeneca: poliziotto muore per trombosi' [A second suspicious death after an AstraZeneca injection: officer dies of blood clot]. In the present article, although the two images portray the same given and new information relation, visual resources reinforced the headline's statement and conveyed readers the idea that they could have been the next victim if they got vaccinated, thereby instilling fear.

Thirdly, as mentioned in the §4, images depicting a hand holding a vaccine dose ranked as the second most frequent in the corpus. These images displayed a close-up of a vaccine dose, syringe, or ampoule, with an out-of-focus doctor, nurse, or gloved hand in the background. Although no textual or multimodal commentary accompanied these images, a similarity in Visual Salience and Framing can be noted between these images and those depicting individuals holding guns[10]. Furthermore, whilst these two representations are not compositionally correlated, the power of images of influencing and shaping public perception should not be underestimated. In fact, as Zollo (2021) underlined:

> Close shots can also suggest claustrophobia or a threat if the people represented
> are people who we might not welcome. For example, it is common to see photos
> from Middle East in western newspapers where we see groups of men holding

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[10] Copyright prevents this research from showcasing pictures, but a quick search online allows a visual comparison.

> guns and crowds of protesters in extreme close-up. This takes us too close to the
> energy of the moment, suggesting the need to pull back from the madness of the
> situation.

This energy, coupled with the consistent use of Visual Salience and Framing, may have contributed to the intimidating appearance of the featured images, instilling fear in the audience and exacerbating their moral panic.

6. Concluding remarks

This research has tried to underline the extent to which news discourse is influenced and influences its readers through its compositional design. A more limited use of marked themes, reported speech, given and new information inversion, along with the multi-modal strategies employed, might have mitigated the spread of moral panic regarding the AstraZeneca vaccine during the second week of March in Italy. Conversely, the extensive use of sensationalisation (through the anaphoric repetition of *AstraZeneca* as marked theme) and sentimentality (through reported speech and images) may have contributed to a surge of public hysteria surrounding the Italian vaccination campaign. Further investigation into how the foreign press addressed this social issue, along with the effects on citizens, would be valuable. Additionally, examining unavailable articles may provide insights into whether they employ more sensational and captivating language, as "most of us can identify the meanings of texts, the meaning of a news report or what the journalist may be trying to make us think. But identifying how this occurs is a little more difficult" (Richardson, 2007: 8).

References

Aslam F., Awan T.M., Syed J.H., Kashif A., Parveen M., *Sentiments and emotions evoked by news headlines of coronavirus disease (COVID-19) outbreak*, in « Humanities and Social Sciences Communications », 7(1), 2020, <https://www.nature.com/articles/s41599-020-0523-3>.

Belsey A., Chadwick R. (eds.), *Ethical Issues in Journalism and the Media*, New York, Routledge, 1992.

Bednarek M., Caple H., *News Discourse*, London, Bloomsbury Publishing, 2018.

Blommaert J., *The debate is open*, in Id., *Language ideological debates*, New York, De Gruyter Mouton, 1999, pp. 1-38.

Busà M.G., *Introducing the Language of the News: a Student's Guide*, London/New York, Routledge, 2013.

Cameron D., *Style policy and style politics: a neglected aspect of the language of the news*, in « Media, Culture and Society », 18, 1996, pp. 315-333.

Chiew A.K.K., *Multisemiotic mediation in hypertext*, in K.L. O'Halloran (ed), *Multimodal discourse analysis: systemic functional perspectives*, London/New York, Continuum, 2004, pp. 131-162.

Fairclough N., *Critical discourse analysis*, London, Longman, 1995.

Fairclough N., *Analysing Discourse: Textual Analysis for Social Research*, London/New York, Routledge, 2003.

Fowler, R., *Language in the News: Discourse and Ideology in the Press*, London/New York, Routledge, 2013.

Franklin B. *et al.*, *Key Concepts in Journalism Studies*, London, SAGE, 2005.

Galtung, J., Ruge, M.H., *The Structure of Foreign News. The Presentation of the Congo, Cuba and Cyprus Crises in four Norwegian Newspapers*, in « Journal of Peace Research », 2, 1965, pp. 64-91, DOI: 10.1177/002234336500200104.

Gooch G., *Williams M.*, *A Dictionary of Law Enforcement*, Oxford, Oxford University Press, 2007 (1st ed.), DOI: 10.1093/acref/9780192807021.001.0001.

Hall S. *et al.*, *Policing the Crisis: Mugging, the State and Law and Order*, London, Palgrave Macmillan, 1978.

Hall S., *Encoding/Decoding*, in S. Hall, D. Hobson, A. Lowe, P. Willis (eds.), *Culture, Media, Language: Working Papers in Cultural Studies*, London, Hutchinson, 1980, pp. 63-87.

Halliday M.A.K., *Explorations in the functions of language*, London, Edward Arnold, 1973.

Hammond J. *et al.*, *English for social purposes: a handbook for teachers of adult literacy*, Sydney: National Centre for English Language Teaching and Research, Macquarie University, 1992.

Harcup T., *Journalism: Principles and Practice*, London, SAGE, 2003.

Kress G., van Leeuwen T., *Colour as a Semiotic Mode: Notes for a Grammar of Colour*, in « Visual Communication », 1(3), 2002, pp. 343-368.

Kress G., van Leeuwen T., *Reading Images: the Grammar of Visual Design*, London/New York, Routledge, 2006.

Leitch V., *Deconstructive Criticism: an Advanced Introduction*, New York, Columbia University Press, 1983.

Li C., Thompson S., *Subject and topic: a new typology of language*, in C.N. Li (ed.), *Subject and topic*, New York, Academic Press, 1976, pp. 457-489.

Luengo M., García-Marín D., *The performance of truth: politicians, fact-checking journalism, and the struggle to tackle COVID-19 misinformation*, in « American Journal of Cultural Sociology », 8(3), 2020, p. 405.

Malinowski B., *The Problem of Meaning in Primitive Languages*, in C.K. Ogden, I.A. Richards (eds.), *The Meaning of Meaning*, London, K. Paul, Trend, Trubner, 1923, pp. 296-336.

Malinowski B., *Coral Gardens and their Magic. A Study of the Methods of Tilling the Soil and of Agricultural Rites in Trobriand Islands*, London, Allen & Unwin, 1935.

Pavlik J.V., *Engaging journalism: News in the time of the COVID-19 pandemic*, in « SEARCH Journal of Media and Communication Research », 13(1), 2021, pp. 1-17.

Perreault M.F., Perreault G.P., *Journalists on COVID-19 journalism: Communication ecology of pandemic reporting*, in « American behavioral scientist », 65(7), 2021, pp. 976-991.

Richardson J.E., *Analysing Newspapers. An approach from Critical Discourse Analysis*, New York, Palgrave Macmillan, 2007.

Sanders K., *Ethics and Journalism*, London, SAGE, 2003.

Thompson K., *Moral Panics*, London/New York, Routledge, 1998 (1st ed.), DOI : https://doi.org/10.4324/9780203980903.

Wang L., *Theme and Rheme in the Thematic Organization of Text: Implications for Teaching Academic Writing*, in « Asian EFL Journal », 9(1), <https://www.asian-efl-journal.com/main-editions-new/theme-and-rheme-in-the-thematic-organization-of-text-implications-for-teaching-academic-writing/index.htm#>.

Yu X., Zhong C., Li D., Xu W, *Sentiment analysis for news and social media in COVID-19*, in *Proceedings of the 6th ACM SIGSPATIAL International Workshop on Emergency Management using GIS*, 2020, pp. 1-4, <https://dl.acm.org/doi/10.1145/3423333.3431794>.

Zha Y., *Marked Themes in WKU Student Writing: a Systemic Functional Linguistic-based Analysis*, in « Advances in Social Sciences, Education and Humanities Research », 325, 2019, pp. 18-26.

Zollo S.A., *Social Semiotics ad theory and Practice*, Power Point Presentation, Gradun Seminar Series 2021, Language, Society & Communication. Methods and Interprétations, University of Navarra, 03/05/21.