The British Press' Coverage of Coronavirus Threat:
A Comparative Analysis Based on Corpus Linguistics
İngiliz Basınında Coronavirus: Karşılaştırmalı Derlem Analiz

Encarnación Almazán-Ruiz
Aroa Orrequia-Barea
Universidad de Jaén, Spain

Abstract
The world is living one of the most difficult times at the moment since a pandemic has been declared by the *World Health Organisation* (WHO, henceforth). In this scenario, information is one of the most powerful tools, not only to just inform, but also to alarm people and create panic. The aim of this paper is to make a comparative linguistic analysis of headlines from serious and sensationalist journalism in the UK. The corpus consists of a compilation of headlines published over the period of one month (from 20th January to 20th February), which have been extracted from four broadsheets: *The Guardian, The Independent, The Financial Times* and *The Telegraph;* and four tabloids: *The Sun, The Mirror, The Express* and *The Daily Mail.* The corpus management tool *Sketch Engine* and the programming language *R* have been used since they allow the user to carry out both an automatic analysis of the text and basic statistics from Corpus Linguistics.
Keywords: Coronavirus, pandemic, British press, headlines, corpus linguistics, discourse analysis.

Öz
Dünya şu anda en zor zamanlardan birini yaşıyor, çünkü Dünya Sağlık Örgütü (WHO) tarafından bir pandemi ilan edildi. Bu senaryoda, bilgi sadece bilgilendirmek için değil, aynı zamanda insanları uyarmak ve panik yaratmak için de en güçlü araçlardan biridir. Bu çalışmanın amacı, İngiltere'de ciddi ve sansasyonel gazetecilikten manşetlerin karşılaştırmalı bir dilbilimsel analizini yapmaktır. Çalışmanın derlemi (korpus), bir ay boyunca (20 Ocak'tan 20 Şubat'a kadar) yayımlanan ve dört geniş sayfadan çıkarılan başlıkların bir derlemesinden oluşur: *The Guardian, The Independent, The Financial Times* ve *The Telegraph*; ve dört tabloid: *The Sun*, *The Mirror*, *The Express* ve *The Daily Mail*. Korpus yönetim aracı *Sketch Engine* ve programlama dili *R* kullanılmıştır, çünkü bunlar kullanıcının hem metnin otomatik analizini hem de derlem dilbilimin temel istatistiklerine izin vermektedir.
Anahtar Kelimeler: Koronavirüs, pandemi, İngiliz basını, manşetler, derlem (korpus) dilbilim, söylem analizi.

Introduction

In the early days of 2020, the world became aware of a strange new disease, the origin of which was unknown at the time. Although the first cases appeared much earlier, it was not until 31st December 2019, when China reported a

number of cases of an unidentified pneumonia detected in Hubei, province of China, that the world became aware of the virus. Shortly afterwards, a previously unknown coronavirus was declared to be behind a lot of cases of the pneumonia in Wuhan. It took until 21st January for the Chinese authorities to confirm that there was human-to-human transmission[1]. Since then, it has been spreading worldwide and in the last few months the whole world has been experiencing something which had not happened for a long time, a pandemic[2]. Despite the rapid proliferation beyond the Chinese borders, the WHO does not name the new disease until 11th February 2020, when the new coronavirus is named *SARS-CoV-2* (*Severe Acute Respiratory Syndrome* caused by a virus called coronavirus[3]) and so the illness is known as *COVID-19*, from the English phrase "coronavirus disease of 2019" (BBC.com).

As the coronavirus disease spreads, so does the media coverage of the risk of this global warning, which has become a trending topic. Reports on this virus in the press have contributed to creating a public health concern by means of the depiction of this potential threat. However, this is not the first time it has happened. Not long ago, in only 2003, a similar disease, SARS, was also treated as a risk in the media. On that occasion, the reporting of the illness was clearly divided into two phases. Firstly, presenting the outbreak as a fear-provoking threat, and, secondly, highlighting the fact that this threat is "happening in a geographically and/or culturally distant population" like China. The obvious consequence was that the media contributed to the stigmatization and discrimination against Asian communities (Smith 3117-18). Similarly, the psychological influence of the disease can be related to two different aspects of information about SARS. On the one hand, the extremely rapid broadcast of information, which made it clear that it was more important to inform in real time than to discriminate confusing information. On the other, much of the news information "was based on opinion, guesswork and preliminary results" revealing the lack of accurate and professional information on the disease (Smith 3117). In fact, in a sense, SARS's economic consequences were even worse than the real spread of the disease.

As a matter of fact, the information at this stage of the pandemic is one of the essential elements in people's lives, since many countries have had to confine themselves to avoid the contagion and the uncontrolled spread of the disease. Thus, the population cannot do anything but stay at home and either watch or read news to be informed.

The question is whether the media in general and newspapers in particular fulfil their basic purpose of reporting information and news objectively or whether they help create panic and start social alarm. The present paper is aimed at making a corpus-based discourse analysis of broadsheet and tabloid headlines in order to study the linguistic differences between them when recounting

---

[1] https://www.theguardian.com/world/2020/mar/13/first-covid-19-case-happened-in-november-china-government-records-show-report

[2] https://www.who.int/emergencies/diseases/novel-coronavirus-2019

[3] https://www.who.int/csr/sars/en/

coronavirus news items. As Montgomery states, searching the news discourse involves admitting the potential power of discourse as the bridge between the audience and the depiction of reality (21). In fact, in news discourse analysis, the linguistic and the social are closely interrelated (23).

The paper is organised as follows: after painting a picture of the situation, the theoretical framework is presented to explain the most important pillars on which the analysis focuses. Afterwards, the corpus and its compilation process are provided as well as the methodology and main tools used to analyse the texts. Then, the analysis is detailed at the same time that the results are discussed. Finally, some conclusions are drawn.

The British Press: Broadsheets vs Tabloids

Traditionally, British newspapers have been divided into two different categories: *broadsheets* and *tabloids*. Factually, this classification is related to the page size of the newspaper and its origin is in the 18th century when the British government imposed a newspaper tax on the number of pages (Rogers). As a result, printing a newspaper with many pages resulted truly expensive. Broadsheet newspapers emerged because it turned out to be cheaper to print a newspaper using a bigger page size and reducing the number of pages

According to the Merriam-Webster Dictionary, broadsheets have large pages ("broadsheet"), whereas tabloids have a smaller page size ("tabloid"). Apart from the size distinction, broadsheet newspapers are generally associated with serious and intellectual subjects. However, tabloids usually contain less serious news items and they regularly focus on celebrity coverage and more popular interest stories. Nevertheless, we can assume this size distinction between both types of papers is no longer true because newspapers such as *The Independent* and *The Times* have adopted tabloid size and currently the terms "quality" versus "popular" can be considered more accurate to denote this distinction (Alba-Juez 82). Despite this fact, the traditional distinction between them will be used on these pages because of its general acceptance. Furthermore, the differences between both types of newspapers have been highlighted by some authors, such as Fowler and Conboy. The latter states that the tabloid press in Britain "retains a certain continuity in format, content and language with older forms of popular printed entertainment such as chapbook, ballad, almanac and broadside" (Conboy 45).

When talking about the news media, the way of presenting the information is essential to catching the readers' attention. Molek-Kozakowska states that journalists are conscious that not all stories or news items share the same degree of relevance or importance; however, the way of presenting them can attract more or fewer readers. According to her, sensationalism is a discursive device used by the news media professionals in order to present a news item as more interesting and relevant than it truly is (177). Conventionally,

sensationalism is closely connected with tabloid journalism and vice versa, because tabloids are usually described as the popular press, which presents the news items using textual strategies to increase their readership number (174). Nonetheless, the scholar distinguishes two important aspects related to sensationalism, which should not be confused. Firstly, the choice of the topic to be covered, which can be related to a sensationalist one such as "scandal, crime, sex". On the other hand, it is the "sensationalising way of packaging information", which can make the topic "appear more relevant or interesting" (174). Definitely, this second issue is the most relevant one for this paper since we are interested in analysing the linguistic features of headlines. Moreover, all the compiled headlines deal with the same topic, to wit, the coronavirus; therefore, it is not the goal of these pages to determine whether the topic itself can be considered as sensationalist or not.

It is undeniable that language in combination with textual and other linguistic devices plays a crucial role when presenting a news item to readers. As Montgomery states, the journalistic discourse can be considered as an effective tool to describe reality and its communicative potential is noteworthy to capture readers' attention (21). In fact, headlines play a fundamental role in achieving it, because they can be considered a hook to attract the audience's attention (Molek-Kozakowska 180).

Theoretical Framework

Newspaper headlines are, on the whole, the first thing that catch the eye on a news item and depending on how attractive or interesting it is, the reader will continue reading the story or not. For that reason, the language choice in the headline can be an important factor presenting the facts, since the group of words used in a headline not only recounts the content of the article but also gives the reader a clear idea of what the article is about (Kuiken et al. 1300). Likewise, Dor explains that newspapers headlines can be considered "relevance optimizers" because they help readers create the best context to interpret the issue. Thus, headlines "are designed to optimize the relevance of their stories for their readers" (695).

Bednarek and Caple argue that headlines present some linguistic features which distinguish them from other styles of news discourse. Among these characteristics, the authors highlight "the use of non-tensed phrases instead of clauses", the preference for the present tense to present events as timeless facts, the frequent "use of marked/emotional/evaluative words", and the presence of "pseudo-direct quotes or allusions" as intertextual markers (qtd. in Molek-Kozakowska 180-81). Apart from the linguistic characteristics that distinguish headlines, some scholars (Dor; Kuiken et. al.) have established the different properties which make a headline appropriate. Among them, Dor states that "the most appropriate headline for a news item is the one which optimizes the relevance of the story for the readers of the newspaper" (707). The author also specifies the different properties that a headline should include to be considered an appropriate one (708-15); however, they will not be detailed in this paper for

two reasons, mainly because this article is not aimed at determining the appropriateness of headlines and also due to space restriction.

It is undeniable that the appearance of the Internet has changed not only the way people read the press but also the role of news headlines. Therefore, competitiveness increases because many sources take part in getting readers' attention on the web. Moreover, the need for a good headline that provokes readers' curiosity grows in order to make them open the article and read the whole story (Kuiken et al. 1300). As a result, news professionals have changed "the way they write headlines for their articles", basically, "by using words, phrases, and stylistic techniques" that provoke the previously mentioned effect on readers; the goal is to get as many readers interested in clicking as possible. (Kuiken et al. 1303) Under the umbrella term of *clickbait*, many different techniques can be used in a headline to achieve the mentioned goal, such as the use of questions, numbers, sentimental words, quotes and negativity, among others (1312). Stated differently, the headline goal may be explained as the art of providing the reader with the ideal proportion of context and a balanced processing effort (Dor 716). Accordingly, it might be expected that readers use the headline as a selection criterion, which leads them to decide whether or not to devote effort to reading the whole article. Dor concludes that headlines can be considered "relevance-optimizers," which act as an intermediary between readers and stories (720). In the same way, since readers' emotional and contextual resources are activated when interpreting a news headline, it can be stated that some pragma-linguistic and semantic devices are involved in processing it (Molek-Kozakowska 174).

As mentioned above, several factors have contributed to creating a distinction between broadsheet and tabloid newspapers. Apart from the original page size, some divergences have been noticed between the way that broadsheet and tabloid newspapers choose a news item, narrate it and present it to the reader by means of a headline. Consequently, it can be assumed that broadsheet and tabloid headlines will also differ in the way of writing their news headlines. According to Dor, broadsheet readers are supposed to be "more proficient, cognitively-energetic and curious" than readers who usually prefer tabloids. These qualities would explain the fact that broadsheet headlines are usually "longer, more complex and more difficult to read" than headlines in tabloid newspapers (719). However, this difference was remarked regarding printed headlines. On the Internet, on the other hand, headlines become longer, including more quotes and questions (Kuiken et al. 1312).

In general terms, tabloid newspapers deal with less serious news items and are related to sensationalism and celebrity gossip. Sensationalism can be interpreted as a discourse strategy used by tabloids so that news items are presented as more interesting and extraordinary and, indeed, more appealing to readers (Molek-Kozakowska 173). As a matter of fact, many scholars argue that sensationalism in news can be considered from a dual perspective: concerning

either the content of the news item or the formal features present in the news message (Alba-Juez 5). According to this, one of the motivations for the present paper is to elucidate whether or not there are noteworthy differences between both types of newspapers when dealing with the same issue.

Although sensationalism is a widely used term, it is not an easy task to determine which aspects or features can be described as sensationalist marks or signs. With regards to discourse analysis, there have been diverse attempts to formulate concrete frameworks to study digital communication; however, there are numerous factors related to digitally mediated discourse that make it difficult to achieve it (Jones et al. 1). Regarding sensationalism in tabloid headlines, Molek-Kozakowska makes a good attempt to establish a pragma-linguistic framework and determines among others the following features: (i) sensationalist illocutions; (ii) semantic macrostructures/themes; (iii) narrative formulas; (iv) evaluation parameters; (v) interpersonal and textual devices (182-93).

As far as illocutions are concerned, the author determines those categorised as sensationalist: "exposing, speculating, generalising, warning, and extolling," among others (Molek-Kozakowska 184). In the succeeding analysis of the corpus it will be stated that the main illocution in the analysed headlines is that of "warning" since all of them concern the same health issue, that is to say, the coronavirus disease. Within the semantic features, the scholar presents the most frequent themes considered as sensational and clarifies why the semantic macrostructures must be integrated into her framework. According to her, the lexical choices and the syntactic patterning in headlines are involved in "how subsequent text is to be comprehended and evaluated" (185). As a result, we will also study the lexical choice in our research, focusing not only on the most frequent words but also on the most frequent bigrams in both types of newspapers. On the other side, Molek-Kozakowska explains that narrative structures can be easily identified within the syntactic structure of headlines and concludes claiming that it is rather distinctive to find the climax before the complication (187). In our analysis, this aspect will also be studied, focusing on the use of the word *after* to differentiate both events of the story told in the headline. Likewise, the evaluation parameters refer to some discursive devices which depict newsworthiness such as the use of interrogative questions, negative terms and capital letters, among others (187-191). Therefore, some of these devices will be studied in the analysis of the corpus. Finally, among the interpersonal and textual devices, it is worth mentioning the use of direct vs indirect speech, as well as the presence of illocutionary verbs for the reporting (192). As could be expected, this aspect will also be considered in our study, presenting concrete examples in which the use of direct or reported speech can make a difference.

Needless to say, among all the serious issues that may concern the population, health is likely to be one of the most relevant and thoughtful, and, certainly, the scale of a health issue can be rapidly spread by means of the media. Starting from the premise that news is the information about new or recently happened

events, it might be assumed that what is published in newspapers is relevant to readers and is intended to arouse some degree of interest. Moreover, in some way, society influences the news and the covered stories in the media are motivated by a complex process of selection. In other words, if society creates news items, the way of telling them is a representation of the world and language is the tool used to do it. In addition, since language is defined as a semiotic code, it is undeniable that social traits are always present in news discourse, and in that sense, news is not a totally objective reflection of events (Fowler 2-4). Accordingly, it might be accepted the assumption that there are different ways of expressing or telling the same fact, and, as Fowler states, these differences convey social and ideological principles (4). Basically, these principles can establish a clear dissimilarity when presenting a news item in a newspaper headline. Besides, they can help determine the traditional distinction between broadsheet or quality newspapers and tabloid or popular ones.

Corpus

The corpus consists of 4,698 headlines extracted from the online version of eight different newspapers, four broadsheets: *The Guardian, The Financial Times, The Independent* and *The Telegraph*[4]; and four tabloids: *The Sun, The Mirror, The Express* and *The Daily Mail*[5]. The corpus has 71,529 tokens and 6,778 types, distributed as table 1 shows:

Newspapers	Tokens	Types
Broadsheets	15,217	2,829
Tabloids	56,312	6,096

Table 1. Distribution of the corpora

The selected headlines correspond to the period from 20th January to 20th February, coinciding with the increase of coronavirus cases in China and the beginning of the pandemic in the rest of the world. This period is interesting, since, as happened with SARS, at the beginning coronavirus was presented by the media as a potential threat, which would only affect Chinese people and not the rest of the world (Smith 3118). The choice of these newspapers was motivated by (i) the ideology, in order to have a representation ranging from the most conservative to the most left-wing newspapers; (ii) the quality, from the quality press, as *The Guardian* is considered, to down-market tabloids, such as *The Sun*, including mid-market tabloids, like *The Daily Mail* (Molek-Kozakowska. 181–182); and (iii) the websites, since they provide the possibility of gathering

[4] https://www.theguardian.com/international, https://www.ft.com/; https://www.independent.co.uk/, https://www.telegraph.co.uk/
[5] https://www.thesun.co.uk/; https://www.mirror.co.uk/; https://www.express.co.uk/; https://www.dailymail.co.uk/home/index.html

previous headlines. The headlines have been manually extracted from each website, using the search box to look up the keyword 'coronavirus'. This action is twofold: on the one hand, this search works as a filter, easing the manual extraction, since this is a very tiresome and time-consuming activity; on the other, it guarantees the appearance of this word in each headline. The total number of compiled headlines corresponding to each newspaper as well as the total of each category can be seen in table 2:

Newspapers		Number of headlines
Broadsheets	The Guardian	425
	The Financial Times	246
	The Independent	295
	The Telegraph	295
	TOTAL	1,261
Tabloids	The Express	513
	The Mirror	75
	The Sun	241
	The Daily Mail	2,608
	TOTAL	3,437

Table 2. Number of headlines for each newspaper

As far as the number of headlines is concerned, it could be said that it is balanced in both newspaper types if not for *The Daily Mail*. Surprisingly, this one tabloid published more headlines than the four broadsheets together in the same period of time. Some characteristics of this newspaper are worth mentioning in order to understand this fact. First of all, *The Daily Mail* does not follow an overtly political ideology, but a more moderate editorial line and mainly it pays attention to both social and celebrity issues (Molek-Kozakowska 181-182). The fact that it does not only cover the coronavirus topic but also celebrities' problems with this disease may account for such a huge difference in number. In fact, gossiping is its key to success. According to BBC, the online version of *The Daily Mail* is the world's most visited newspaper. Experts highlight that how the celebrity gossip is presented, using plenty of images, and the fact that it does not have links to external websites are among the reasons why this tabloid has

become so popular in the last few years[6]. Apart from that, the coronavirus topic responds to one of the characteristics of sensationalism, that is, "that news items are selected for reporting to engage audiences emotionally" (Molek-Kozakowska 178). Definitely, treating health issues can be a controversial topic and when it becomes a global problem, the matter gets worse. The illness *COVID-19* is likely to be one of the most covered news items in recent years. From the very beginning, this new disease has been presented as a risk in the media, and, needless to say, living in a globalised world has contributed not only to the fast spread of this infectious disease but also to the creation of a social and health concern. The news flow over this period of time can be seen graphically in figure 1.
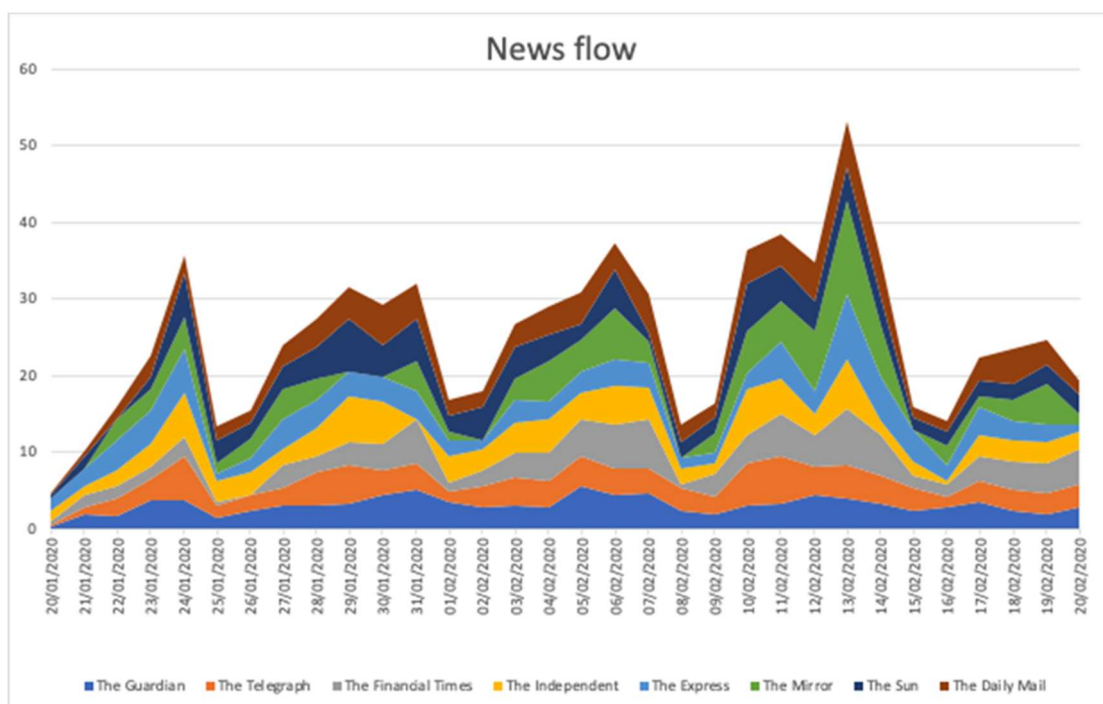
Fig. 1. Percentage of news flow from the 20th January to 20th February

There are two important aspects which can be inferred at first glance from figure 1: on the one hand, the four tabloids produce far more news per day than the broadsheets; on the other, it is evident that the number of news items has been increasing over time, though there are some peaks coinciding with important events regarding the coronavirus crisis. The first peak, 22nd and 23rd January, corresponds to the moment when the lockdown in Wuhan was decreed, the first place in the world where coronavirus was detected and also the first to take measures. The second peak, 30th and 31st January, coincides with the declaration of coronavirus as a Public Health Emergency of International Concern (PHEIC)[7] by the WHO. Regarding the third peak, 5th and 6th February, there is no single

---

[6] https://www.bbc.com/news/magazine-16746785

[7] As can be seen in the timeline created by WHO to inform people:
https://www.who.int/news-room/detail/27-04-2020-who-timeline---covid-19

event which provokes such a huge amount of news, but different ones. Although some of them have to do with the development of the crisis in China, the vast majority of them are related to the spread of coronavirus beyond China's borders. It is then when the coronavirus disease becomes a real threat, with the appearance of some cases in different countries, such as Australia, the US and the UK. On the one hand and related to China, news reported events as the possible case of an infected newborn, the fact that many people from different countries were in Wuhan at that moment and needed to be evacuated; and the death of the doctor who warned of the danger this disease may imply. On the other, regarding the rest of the world, important news items were: the cruise in which travellers had to be quarantined; the appearance of the third case in the UK and, consequently, the preparation of isolation rooms for future cases; the increase of cases in Australia and the possible impact this virus could have on the global economy. Another important aspect that needs to be mentioned is that in these days, organisations started to think about the cancellation of some important events (The Mobile World Congress or Tokyo 2020 Olympic Games). The graph reaches the highest peak in the period from 11th to 13th February when the WHO names both the coronavirus disease and the virus officially. Similarly, the increase of cases in the UK and starting to take measures wreaked havoc among citizens and the press.

Methodology

Corpus Linguistics

Although some authors claim that there is a "scarcity of corpus-based discourse studies" (Bhatia et al. 86) and that "the two things [discourse studies and corpus linguistics] are relatively poorly co-ordinated" (qtd. in Bhatia et al. 87), Corpus Linguistics has been chosen to do this analysis for two basic reasons: it deals with the study of language in use in a set of examples, that is, a linguistic analysis; and the dataset, which is a collection of text, is a corpus. In line with Lee's conception of Corpus Linguistics, it can certainly be applied to discourse studies. In fact, this author claims the existence of a type of analysis called "corpus-based discourse analysis (CBDA)" (Bhatia et al. 86).

Although there is some controversy between the experts who claim that Corpus Linguistics is a discipline and those who conceive it as a methodology, in this work, it is applied as a methodology. According to Lee, it can be conceived as a methodological innovation, that is, "a new way of accomplishing old goals", incorporating an approach, which means "a set of theoretical positions and beliefs about the nature of languages and how we can study it" (Bhatia et al. 87). Thus, Corpus Linguistics studies the language through a set of texts which are determinant to draw conclusions, and, consequently, corpus linguists study the language as the rest of linguists do. The difference lies in the use of some tools and techniques which help researchers deal with such a great number of texts (Bhatia et al. 87), such as *Sketch Engine* and the programming language *R* used in this research.

Most corpus-based research is both qualitative and quantitative, however, the difference stems from "how much the researcher actually lets the data determine the results" (Bhatia et al. 88). According to the nature of our analysis, this research can be classified as *corpus-supported*, specifically *corpus-supported critical discourse analysis* (Bhatia et al. 90). It is certainly worth mentioning the scholar Hardt-Mautner, who was a pioneer in doing a study of this type since he analysed a corpus of editorials from British newspapers reporting on the European political and economic integration. In the author's terms, this type of research is described as "concordancing effectively heralds a breaking down of the quantitative/qualitative distinction, providing as it does the basis for quantitative analysis without 'deverbalising' the data, that is, without transferring it, through human intervention, to the numerical mode" (qtd. in Bhatia et al. 90).

Tools: Sketch Engine and R

As previously mentioned, Corpus Linguistics basically deals with the management of certain tools which allow the linguists to explore texts saving time and effort, as a huge amount of information is able to be processed in most cases. As a result, two main tools have been used to do this analysis: Sketch Engine and the programming language R.

Sketch Engine[8] is a free software for corpus management and text analysis. According to Kilgariff et al., discourse analysis is one of the uses of Sketch Engine as it consists of the analysis "of a particular kind of language for what it tells us about the attitudes, power relations and perspectives of the participants" (15). Sketch Engine consists of two different things: the software and the web service. The web service includes both the corpus software and a large set of corpora in different languages. The software has many functions where the user can compile and store their own corpora as well as get some basic statistics related to the corpus analysis (Kilgarriff et al. 8). In this research, we use the two most important functions of Sketch Engine, namely word sketch, which gives this software its name (Kilgarriff et al. 9), and the concordance tool. The word sketch provides a detailed analysis of the words and their surroundings, that is, collocations or recurring patterns that show how words are used in language. This function is somehow connected with the concordance tool. When exploring the patterns displayed in the word sketch, the user may want to know more information about the context in which the words are used in language, hence the concordance. Since there are different types of queries, the context can also be explored using some filters to limit the search (Kilgarriff et al. 11). The list of keywords from each corpus has also been compared so as to see to what extent the lexical choice makes a difference.

Apart from Sketch Engine, we decided to make use of the programming language R, since it provides the user with a wide range of possibilities, not only to enrich

---

[8] To use this program: https://www.sketchengine.eu/

the aforementioned text analysis but also in terms of visualization. R[9] is a high-level programming language and a free software environment. Basically, it is a program for statistical computing, but it can be used for Linguistics (Desagulier). There are two main advantages of using R: on the one hand, it analyses texts in an automatic and computational way to look for patterns, this is known as *text mining*; on the other, it is free and open access, so there is a huge community of users who are constantly developing packages and libraries to carry out different types of analysis (Fradejas Rueda).

Analysis and Result Discussion

In this section, the study of the corpus is detailed at the same time that the results are discussed. This analysis is mainly based on the aforementioned framework, which Molek-Kozakowska develops to research the language used in news items classified as sensationalist. As mentioned before, the scholar states that there are two ways of indicating sensationalism in news: the selection of topics and the way in which the information is reported (174). Accordingly, we will assume that the coronavirus issue depicted in the compiled headlines is inherently sensationalist. Likewise, how the information is presented is the reason why we have decided to apply this framework not only to tabloids, which are assumed to be sensationalists by nature but also to broadsheets since they might be dealing with the coronavirus crisis in a sensationalizing way. Nevertheless, this theoretical framework will be enriched by some other resources appearing in related works (Fowler 171-80; Fuertes-Olivera et al. 1299–302 and Kuiken et al. 1302–03) and some devices observed during the manual extraction process. Therefore, the subsequent analysis will be divided into two domains: firstly, as we are interested in the way the information is presented to readers, we will focus on the lexico-pragmatic devices used in the different headlines. Secondly, we will study the different syntactic and textual devices used in the headlines when depicting the coronavirus issue. All these devices come to show to what extent sensationalism is present in the two types of newspapers regarding the coronavirus topic.

Lexico-pragmatic Devices

As mentioned above, the way of reporting news items is a representation of the world and, certainly, society is involved in this process. According to Fowler, the functional model developed by Halliday is essential to examining the relationship between the linguistic structure and society (68) since a language evolves in relation to social changes (Bakuuro 213). In a nutshell, speakers use language to represent and express their reality and, in this sense, headlines can be examined within Halliday's model. Needless to say that this model studies the nature of language and how it works to achieve an effective message for the reader. As stated in the theoretical framework section, according to Molek-Kozakowska (184), different illocutions can be identified in headlines: exposing, speculating, generalizing, warning, extolling, among others. As far as our corpus

---

[9] To download R: https://www.r-project.org/

is concerned, the main illocution found in the analysed headlines is that of warning, since it is about "generating anxiety about an issue, and optionally, offering suggestions as to how to reduce the possibility of falling victim" (Molek-Kozakowska 184). As a matter of fact, all the compiled headlines deal with the same issue, the coronavirus disease, and, as previously mentioned, the period of selection corresponds with the first stage of the illness, when the major problem was in China, a country far from Europe. The information collected in this first period records the plausible dangers and serious consequences that this virus can bring if the Europeans, in general, and the British, in particular, finally become infected. One clear example is how tabloids reported the alleged contagion of a man because he was next to a woman who was infected, as can be seen in examples (1)-(3):

(1) Coronavirus warning as man catches virus after spending 15 SECONDS with infected woman (*The Express*)
(2) SWIFT AND DEADLY Chinese man, 56, catches coronavirus in just 15 SECONDS after standing next to infected woman at market (*The Sun*)
(3) Chinese man, 56, catchers the killer coronavirus 'within 15 SECONDS' of standing next to an infected woman at a market (*The Daily Mail*)

All of them highlight the fact that *in just 15 seconds* the contagion occured, which is an evident exaggeration and can be considered a clear trait of sensationalism. Although there are no instances of headlines reporting this event in the broadsheet category, there are others which might be also considered as sensationalist:

(4) A man lies dead in the street: the image that captures the Wuhan coronavirus crisis (*The Guardian*)
(5) Inside Wuhan: Dead man lies on empty streets at coronavirus ground zero (*The Telegraph*)
(6) Coronavirus: Hospital workers 'wearing adult diapers because they do not have time to go to the bathroom' (*The Independent*)

This is clearly what Molek-Kozakowska refers to as a sensationalist topic (174), news items that intend to "engage audiences emotionally" (178). Certainly, there are more instances of news items reporting sensationalist events in tabloids than in broadsheets. However, as previously mentioned, sensationalism is not just about the nature of the topic but also about how the information is packaged in the headline. This latter feature is present in both newspaper types regarding this topic. As can be seen in the forthcoming examples, news items can be presented in a neutral way as in (7) in which the newspaper is just reporting a fact. Conversely, in headlines (8) and (9), the fact that the woman was Chinese is emphasised, suggesting that her nationality was the reason why they were not allowed to take that flight.

(7) UK families face being split up in coronavirus evacuation plans (*The Telegraph*)

(8) Coronavirus: British family split up as Chinese wife not allowed on evacuation plane from Wuhan (*The Independent*)

(9) British family allowed to board evacuation flight with Chinese wife (*The Guardian*)

Although the examples report different stories, all of them revolve around the same topic, health, in general, and coronavirus, in particular. Thus, it could be assumed that all of them share the same function, that of warning people against the dangers of this disease; the purpose is to alert the readers about this issue, presenting the risks that falling victim will imply.

As stated above, news discourse is influenced by society, and because of it, this type of discourse cannot be considered a clear instance of objectivity (Fowler 2-4). It is undeniable that the way of presenting and structuring a message is essential to achieve our communicative goal and journalistic professionals are aware of this fact. Therefore, the lexical choice can be considered a powerful device to influence the audience. As a matter of fact, when dealing with health issues, the use of some particular words can be described as alarming or worrying. Some previous examples of this evidence are provided by Wilson, Thomson, and Mansoor in a study about the reporting of SARS by a specific newspaper. The scholars highlight the high frequency of words likely to be considered alarming, such as "deadly" (qtd. in Smith 3117-18).

As might be expected, the word choice is highly significant in the corpus. To begin with, an automatic extraction of the most frequent single words was done in the analysed headlines. It shows that words with unpleasant or alarming connotations, such as *deadly, outbreak, fear,* and *death* are frequently used in both types of newspapers (see fig. 2).
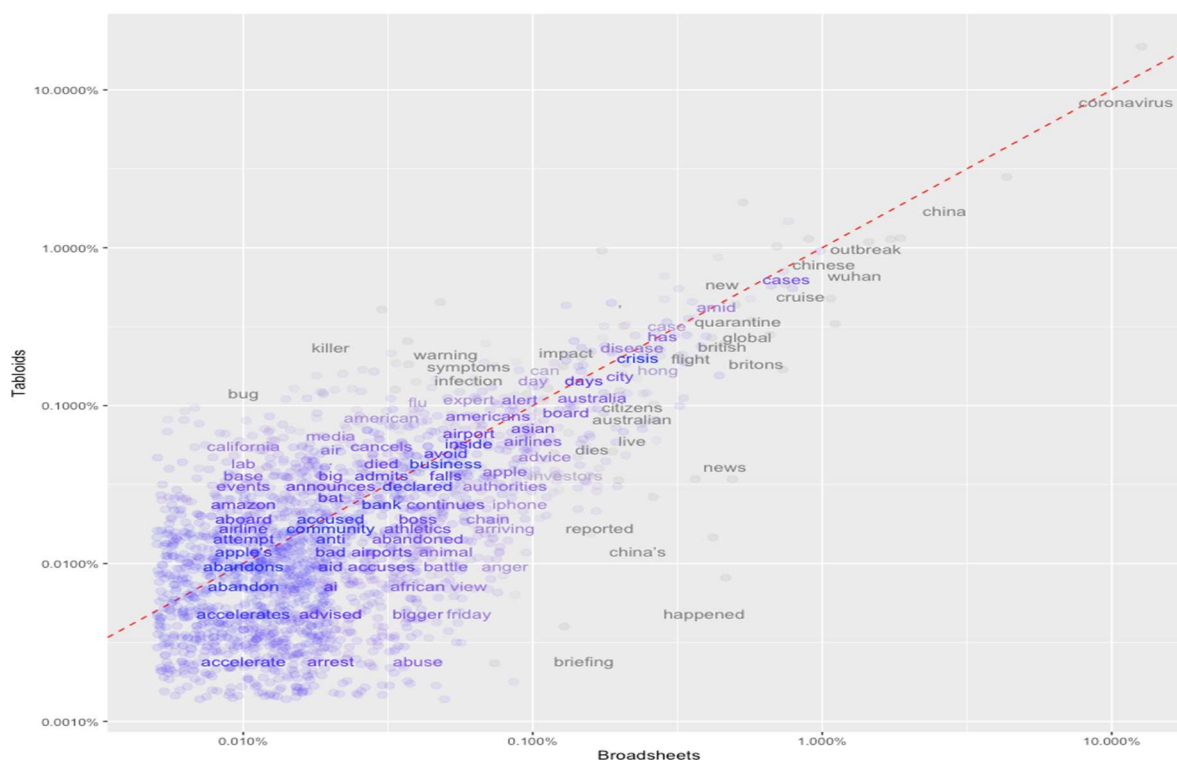

Fig. 2. Lexical comparison of most frequent words

The detailed frequency of the aforementioned words in the corpus is as follows. Firstly, the words *outbreak* and *death* are more frequent in broadsheets than in tabloids, although in the latter case the difference is not rather significant. The frequency of the word *outbreak* is 141 (92.65[10]) in broadsheets and 408 (72.45) in tabloids. Regarding the word *death*, it appears 46 times (30.22) in broadsheets, while it has 166 occurrences (29.47) in tabloids. Secondly, the lexical items *deadly* and *fear* have a higher number of concordances in tabloids. More specifically, the word *deadly* appears 55 (36.14) in broadsheets meanwhile it occurs 263 (46.70) in tabloids. The search of the lemma *fear* shows that it appears 83 (54.54) in broadsheets and 337 (59.85) in tabloids. As the percentages demonstrate, this lexical item with obvious negative connotations is part of the lexical choice of both types of newspapers.

Apart from these words which are common to both corpora, there are some others which are more specific to each corpus, although they are not among the most frequent ones. According to Fowler, "there are different ways of saying the same thing" (4), consequently, the expression of a news item depends on the ideology the newspaper holds. Thus, word and syntactic choice may reflect this ideological stance. The most significant example of this is the use of the word *bug* in tabloids to refer to the coronavirus. There are 51 concordances (9.05) of this word. This may not be meaningful looking at it in isolation, but it makes much more sense when compared with the broadsheet corpus. In the latter, the word *bug* only has 1 remarkable concordance. According to the Merriam Webster dictionary, *bug* refers not only to the common meaning of insect but also to "an often unspecified or nonspecific sickness presumed to be caused by such a microorganism". In tabloids, *bug* is used as a synonym of the word virus, so it may have a double sense ("bug"). The virus which causes this illness was unknown at the beginning, and for this reason, it is suitable to refer to it as a bug, referencing a general and vague word. However, as the meaning of insect is the most widespread among the population, it could be used to present the virus to the readers as something more concrete, which might frighten them. The same thing happens when looking at other words, such as *kill*, which occurs 48 times (8.52) in tabloids, whereas it only appears 2 times in broadsheets; and *panic*, which has 85 occurrences (15.09) in tabloids, while 19 (12.03) in broadsheets.

Likewise, there are other interesting words whose significance is not so considerable, but which also reflect the high sensationalism in tabloids. For example, the lemma *infect* is more frequent in tabloids (95 occurrences, 16.87) than in broadsheets (16, 10.13). As for the disease itself, it also receives different treatment by both newspaper types. Tabloids usually make use of a big variety of words to refer to the illness, again some of them showing sensationalism, such as *pandemic* (37 times versus 9 times in broadsheets), *plague* (44 times versus 3 times in broadsheets); and *epidemic* (44 times versus 10 times in

---

[10] As the size of the corpora is not balanced, the normalised frequency is used. In this case, as the corpus is small, the frequency is calculated per 10,000 words.

broadsheets). As can be seen, all of them are far more frequent in tabloids than in broadsheets and all of them with a dramatic meaning.

In Corpus Linguistics, however, not only single words are significant when comparing lexicon, but it is also interesting to look at combinations of words, that is, multi-word expressions (or MWEs). In this study, we are going to pay attention to MWEs of two tokens, which are called bigrams. As can be seen in figures 3 and 4, the bigrams containing *coronavirus* are the most frequent ones in both corpora, standing out *coronavirus outbreak* that makes it clear that the spread of the illness was still at the first stage. Another significant bigram is *coronavirus fears*, showing the relation of this topic with risk and danger, because fear, either as a noun or as a verb, can be understood as the unpleasant feeling or thought of a plausible danger. The headlines not only warn of the health danger but also of the financial one. Likewise, the bigram *coronavirus death* occurs in both corpora. It might be interpreted two-fold: firstly, death is presented as a real risk since the onset of the disease; and secondly, it could be assumed that the frequency of this combination is a sensationalist trait because the number of dead people was not so high at the initial stage of the outbreak. Moreover, *death toll* is the subsequent more frequent noun phrase in the headlines. Unfortunately, it is undeniable that finally, death has become a regrettable fact.
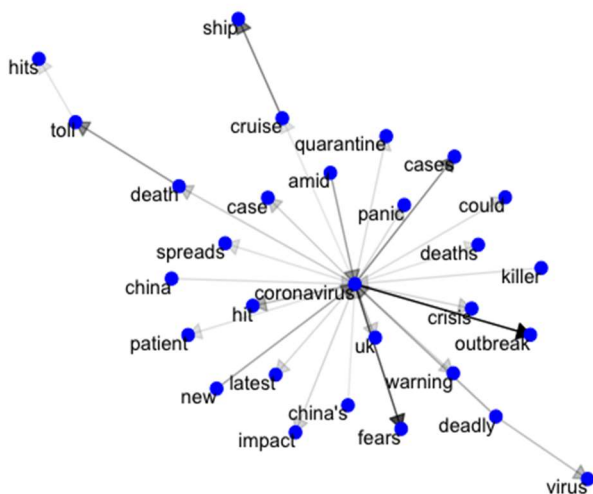
Fig. 3. Most frequent bigrams in tabloids
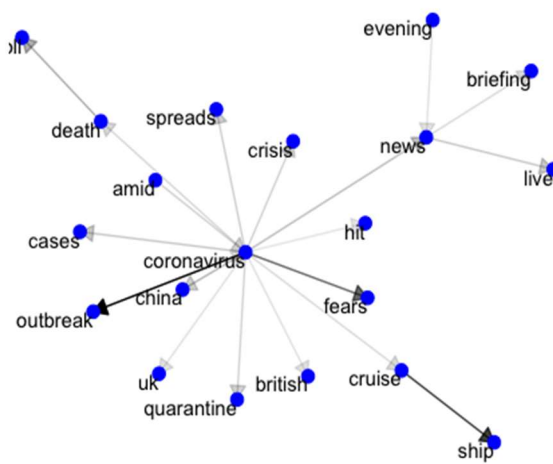
Fig. 4. Most frequent bigrams in broadsheets

It might be asserted, however, that the word *coronavirus* plays a fundamental role in the headline compilation. Not only was *coronavirus* a selection criterion for the corpus, but this word is also used in the headline message as a linguistic device to influence readers, causing them worry, alarm, and even panic. In many of the selected examples (324 times in broadsheets versus 206 in tabloids), this word appears at the very beginning of the headline and before a colon. Following the aforementioned model by Halliday, two parts can be distinguished in the distribution of the message: *theme* and *rheme*. The *theme* is the given information, usually in front position, which acts as a starting point. Likewise, it is noteworthy that this initial position is aimed at causing a greater impact on

the audience. This fact can be clearly observed in the following examples (10-17):

> (10) Coronavirus: keep calm, carry on (*Financial Times*)
> (11) Coronavirus: health officials announce first known US case (*The Guardian*)
> (12) Coronavirus: How will the outbreak affect the global economy? (*The Independent*)
> (13) Coronavirus: British Airways suspends all flights to mainland China as outbreak spreads (*The Telegraph*)
> (14) Coronavirus: Recently returned travellers told to `self-isolate´ (*The Daily Mail*)
> (15) Coronavirus: UK tourist stranded on cruise ship only eaten cornflakes for two days (*The Express*)
> (16) Coronavirus: Brit couple trapped on Diamond Princess cruise ship test positive (*The Mirror*)
> (17) LOCKDOWN BRITAIN Coronavirus: Millions of sick Brits to be told 'stay off work for TWO WEEKS if deadly virus spreads in UK'(*The Sun*)

Undoubtedly, this lexical selection can be interpreted as an expression of sensationalism, present and used by both types of newspapers. As previously happened with SARS, the coronavirus disease is treated in headlines as a potential risk causing alarm in the population since the very beginning. The current coronavirus is presented as a killer virus, which can cause terrible consequences if the population is infected.

Syntactic and Textual Devices

From a syntactic point of view, the information in headlines needs to be packaged, so as to be informative in only a few words. Consequently, fully grammatical sentences are scarce. One of the resources to achieve this is to compress the structure of the headlines, which implies omitting or deleting mainly functional words, such as definite or indefinite articles (*a, the*) or some verbs (*is*, *are*), mainly auxiliaries (Montgomery 80-81). Since this resource is very characteristic of headlines in general, it is present in both tabloids and broadsheets, since it is related to space reduction.

> (18) Wall St steady as investors assess China virus impact (*The Financial Times*)
> (19) Coronavirus: UK tourist stranded on cruise ship only eaten cornflakes for two days (*The Express*)

As far as temporality is concerned, adverbs are usually deleted from headlines because of space restriction. This peculiarity, together with the use of non-finite clauses, may cause a loss in causal relations (Montgomery 82). To avoid this, the conjunction *as* is employed to join two subordinate clauses in which each event is "treated as somehow continuous with another and with the moment of the

utterance" (Montgomery 82). The following examples (20) and (21) are just an illustration of it.

> (20) European shares dip as Chinese coronavirus concerns deepen (*The Guardian*)
>
> (21) British tourist fighting for life in Thailand is feared to be first western victim of new Chinese coronavirus as third patient DIES and outbreak spreads to South Korea (*The Daily Mail*)

However, this is not always the case and sometimes newspapers make use of syntactic structures to indicate the temporality that is needed in reporting certain events. It can be considered, then, that there is a short narrative of a series of events in each headline. As mentioned above, in order to achieve sensationalism, the "climax precedes the complication" and the use of the word *after* in headlines can be interpreted as a clear sign of this narrative order (Molek-Kozakowska 186-7). As can be seen in the following examples (22-29), there is always an event at the beginning of the sentence which refers to the consequence or *climax*, in Molek-Kozakowska's terms (186-87), followed by the cause or *complication* which provokes that consequence. The consequence is presented as the first element in the headline with a clear aim, to catch readers' attention and to achieve sensationalism. Definitely, the examples show that this linguistic device is found in every newspaper

> (22) Coronavirus subject sparks panic after wandering through CANCER unit and staff offices (*The Express*)
>
> (23) Precautions stepped up after fourth death in China blamed on coronavirus (*The Daily Mail*)
>
> (24) Coronavirus: Brit tourist's first stop is McDonald's after being 'cured' of bug (*The Mirror*)
>
> (25) VIRUS PANIC Three police officers quarantined over coronavirus fears in Stoke-on-Trent after 'Chinese' prisoner falls ill in custody (*The Sun*)
>
> (26) Stocks recover after deep coronavirus sell-off (*The Financial Times*)
>
> (27) Australian man tested for coronavirus after returning from China with respiratory illness (*The Guardian*)
>
> (28) Coronavirus outbreak: Bristol police stations closed after Chinese detainee falls ill (*The Independent*)
>
> (29) Wuhan Mayor offers to resign after admitting slow response to coronavirus outbreak (*The Telegraph*)

As mentioned before, the change in the way people consume news has provoked a change in the devices used to attract readers' attention. Nowadays what the media looks for is an increase in the clicks. Questions are closely related to the *clickbait* phenomenon, since they "initiate cognitive processes" and "generate attention, interest, and curiosity in a particular communication, to establish agreement or concessions with this communication, and, in turn, induce certain types of behaviors" (Lai and Fabrot 290). This technique is not only used in newspaper but also in other fields, such as politics and marketing. Question headlines are usually combined with elements of self-referencing, as personal

pronouns in the 1st or 2nd plural person (*you, we, us*), to involve the reader and make them identify with their beliefs (Lai and Fabrot 291). In our corpora, questions are found in both types of newspapers with a slight difference in the frequency. Whereas in the broadsheets the frequency is 30.39, it is higher in tabloids (40.84). The use of this device comes to show once again that both types of papers take advantage of the same techniques to achieve the same goal.

> (30) Coronavirus: do airport screenings and face masks work? (*The Telegraph*)
>
> (31) Coronavirus UK: What are the symptoms and what is the NHS advice? (*The Mirror*)

In order to catch readers' attention, headlines usually take advantage of a typographical device to signal emphasis such as the use of capital letters is. Although capitalisation is not used in each newspaper, there is a more frequent occurrence of headlines with capital letters in tabloids than in broadsheets. As the following examples show (32-35), this device is used in just one word, two, three, or even the whole headline, focusing the emphasis on only one part of the message or on the whole, and, as a result, trying to provoke a response in the reader.

> (32) Coronavirus LIVE: Two die after contracting DEADLY virus on board Japanese cruise Ship (*The Express*)
>
> (33) PLAGUE PANIC China 'rounds up and executes dogs to stop coronavirus' even though no evidence of it spreading to pets (*The Sun*)
>
> (34) US STOCKS SNAPSHOT-Wall St slips from record levels at open on fears over new coronavirus case count (*The Daily Mail*)
>
> (35) CORONAVIRUS: HEATHROW AIRPORT CREATES SEPARATE ARRIVAL AREA FOR PASSENGERS ARRIVING FROM WUHAN (*The Independent*)

Interestingly, examples with every word in capital letters are found in broadsheet headlines, what might be interpreted as a clear sign of sensationalism. In broadsheets, all 42 occurrences are found in just one newspaper, *The Independent*, whereas in tabloids, headlines with words in capital letters appear in three out of the four newspapers (*The Mirror* is the only one which does not use them). In *The Sun*, the most sensationalist newspaper, every headline (241) contains one or two words in capital letters at the beginning, working as keywords of the rest of the headline. Regarding *The Express*, there are 118 headlines with capital letters, in which there are one or two words with this format to emphasise some aspects, such as time or places. With regards to *The Daily Mirror*, it combines both, headlines which are totally written in capital letters (9) and headlines containing only one or two words (442), again in order to highlight some important information about the news.

Additionally, another device found in headlines, which is sometimes related to the use of capital letters is *forward referencing*. This resource refers to the use of signal words in a cataphoric way, such as demonstrative (*this, these*) or interrogative pronouns (*why, who*) to make reference to some information which is included in the article, encouraging the reader to look at the whole article (Kuiken et al. 1303). These words usually appear in capital letters to catch readers' attention, and it is a very useful technique to achieve the clickbait phenomenon. As the example (36) shows, if the reader wants to know what *THIS* refers to, they should continue reading the whole article.

> (36) UK coronavirus symptoms: Study finds new way coronavirus spreads - avoid infection by THIS (*The Express*)

The use of direct or indirect speech in headlines might be an interesting aspect to involve the reader in the headline and consequently, to make them read the whole story. As Molek-kozakowska states, the interpretation of the quote might be misunderstood due to a lack of appropriate or enough context (192). However, from our point of view, including somebody else's exact words contribute to making the story more realistic. The focus is rather on the precise words than on the person who says them. Certainly, there are many remarkable examples of this premise in the analysed corpus, such as the following:

> (37) 'I walked through the Wuhan fish market every day and have not been tested for the coronavirus', says British teacher (*The Telegraph*)
> (38) 'I could be spreading the disease everywhere': British teacher who lived next to seafood market at centre of coronavirus outbreak was 'wrongly' told he didn't need testing after returning to the UK (*The Daily Mail*)

Despite the fact that both examples make reference to the same event, it is treated differently. It is worth mentioning that the exact words appear in front position, demanding readers' attention. In both cases, the agent (*a British teacher*) is introduced in the headline story though it is presented as an anonymous person. The crucial fact is what was said and not by whom. In the example (37), the presence of the introductory verb (*says*) makes the reported words more dramatic. This feature is very frequent in headlines to achieve this effect. The change in the reporting verb heightens the dramatic force of the headline message as shown in the forthcoming examples (39-41).

> (39) UK warns coronavirus outbreak will 'get worse before it gets better' (*The Financial Times*)
> (40) 'We could have two viruses spreading at once': Deadly coronavirus could cause CHAOS in winter when the winter flu season hits, leading doctor warns (*The Daily Mail*)
> (41) Coronavirus alert: Virus could be 'catastrophic' as expert warns nCoV reaches 'PANDEMIC' (*The Express*)

As the example (41) shows, sometimes a general source (*experts, doctors*) is introduced in the headline by means of a subordinate clause using the conjunction *as* and a reporting verb to achieve a more realistic perspective.

Conclusions

There is no doubt that a wide variety of linguistic devices can be used when reporting a news item in order to achieve the main goal of journalism, to wit, to get as many readers as possible. These linguistic resources, typical in journalistic language, are used in the analysed headlines in order to show different ways of dealing with the coronavirus disease. Although both types of newspapers deal with the same topic, it is noteworthy that both present it as a real danger and as a serious threat. Surprisingly, the research demonstrates that both types of newspapers show some sensationalist features, aimed at catching readers' interest. Nonetheless, tabloids, as could be expected, always include more instances of every device that, according to the theoretical framework, is considered to be sensationalist.

Significantly, this way of reporting news seems to be an increasingly more frequent practice, since nowadays readers usually consume more information on the Internet. The different devices analysed in the research indicate that sensationalism is present in both types of papers; certainly, to a greater extent in tabloids. From our point of view, this fact reduces objectivity when introducing the news item to the readers and the information loses journalistic rigour. Consequently, getting as many clicks as possible is more important than information.

Although English speakers still differentiate between the broadsheet and tabloid newspapers, it seems that this distinction is increasingly blurred, with examples of broadsheets, such as *The Independent*, which has actually adopted a tabloid-style (use of capital letters, questions, etc.). Certainly, broadsheets, such as *The Guardian, The Telegraph* or *The Financial Times* seem to be more serious at first glance; however, as has been shown, they also report on sensationalist topics using devices which have always been characteristic of tabloids and, consequently, sensationalism. To conclude, it can be said that there are no remarkable differences between both types of newspapers when dealing with the same health issue because in greater or lesser degree all the selected papers make use of these linguistic devices, thereby presenting the news item in as interesting a way as possible.

Works Cited

Alba-Juez, Laura. "Evaluation in the Headlines of Tabloids and Broadsheets: A Comparative Study." *Evaluation in Media Discourse: European Perspectives*, no. November, 2017, pp. 81–119, doi:10.3726/b10531.

BBC News Mundo. Coronavirus: qué significan los términos que usamos con más frecuencia al hablar de la pandemia de covid-19, 2020. www.bbc.com/mundo/noticias-51969328. Accessed 29 March 2020.

Bakuuro, Justine. "Demystifying Halliday's Metafunctions of Language." *International Journal of Language and Literature*, vol. 5, no. 2, 2017, doi:10.15640/ijll.v5n2a21.

Bhatia, Vijay K., et al. "Advances in Discourse Studies." *Advances in Discourse Studies*, vol. 9780203892, 2008, doi:10.4324/9780203892299.

"Broadsheet." *Merriam-Webster.com Dictionary*, Merriam-Webster, www.merriam-webster.com/dictionary/broadsheet. Accessed 17 Apr. 2020.

"Bug." *Merriam-Webster.com Dictionary*, Merriam-Webster, www.merriam-webster.com/dictionary/bug. Accessed 17 Apr. 2020.

Conboy, Martin. "Parochializing the Global: Language and the British Tabloid Press." *New Media Language*, 2004, pp. 45–54, doi:10.4324/9780203696965.

Desagulier, Guillaume. "Corpus Linguistics and Statistics with R: Introduction to Quantitative Methods in Linguistics." *Springer*, 2017, doi:10.1007/978-3-319-64572-8.

Dor, Daniel. "On Newspaper Headlines as Relevance Optimizers." *Journal of Pragmatics*, vol. 35, no. 5, 2003, pp. 695–721, doi:10.1016/S0378-2166(02)00134-0.

Fowler, Roger. "Language in the News: Discourse and Ideology in the Press." *Language in the News: Discourse and Ideology in the Press*, 2013, doi:10.4324/9781315002057.

Fradejas Rueda, José Manuel. *Cuentapalabras. Estilometría y Análisis de Textos Con R Para Filólogos.* 2019, http://www.aic.uva.es/cuentapalabras.

Fuertes-Olivera, Pedro A., et al. "Persuasion and Advertising English: Metadiscourse in Slogans and Headlines." *Journal of Pragmatics*, vol. 33, no. 8, 2001, pp. 1291–307, doi:10.1016/S0378-2166(01)80026-6.

Jones, Rodney H., et al. "Discourse and Digital Practices." *Discourse and Digital Practices*, 2015, doi:10.4324/9781315726465.

Kilgarriff, Adam, et al. "The Sketch Engine: Ten Years On." *Lexicography*, vol. 1, no. 1, 2014, pp. 7–36, doi:10.1007/s40607-014-0009-9.

Kuiken, Jeffrey, et al. "Effective Headlines of Newspaper Articles in a Digital Environment." *Digital Journalism*, vol. 5, no. 10, Routledge, 2017, pp. 1300–14, doi:10.1080/21670811.2017.1279978.

Lai, Linda, and Audun Farbrot. "What Makes You Click? The Effect of Question Headlines on Readership in Computer-Mediated Communication." *Social Influence*, vol. 9, no. 4, Psychology Press, 2014, pp. 289-99, doi:10.1080/15534510.2013.847859.

Molek-Kozakowska, Katarzyna. "Towards a Pragma-Linguistic Framework for the Study of Sensationalism in News Headlines." *Discourse and Communication*, vol. 7, no. 2, 2013, pp. 173–97, doi:10.1177/1750481312471668.

Montgomery, Martin. *The Discourse of Broadcast News: A Linguistic Approach*. Routledge, 2007.

Rogers, Tony. "Differences between Broadsheet and Tabloid Newspapers." *ThoughtCo.* 2019. *ThoughtCo.* Web.

Smith, Richard D. "Responding to Global Infectious Disease Outbreaks: Lessons from SARS on the Role of Risk Perception, Communication and Management." *Social Science and Medicine*, vol. 63, no. 12, 2006, pp. 3113-23, doi:10.1016/j.socscimed.2006.08.004.

"Tabloid." *Merriam-Webster.com Dictionary*, Merriam-Webster, www.merriam-webster.com/dictionary/tabloid. Accessed 17 Apr. 2020.