

# Spreading of Neological Terms Related to Pandemics in Spanish and British Newspapers: A Contrastive Analysis

*La difusión de términos neológicos relacionados con pandemias en periódicos españoles y británicos: un análisis contrastivo*

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**Abstract:** The main objective of this paper is to study the neological terms that have spread through the media, particularly through newspapers during pandemics in both Spanish and British newspapers. We hypothesize that during the swine flu pandemic in 2009-2010 and the COVID-19 pandemic in 2020, a variety of neologisms spread through newspapers. Employing corpus linguistics, we have extracted and analysed forty candidates to become neologisms and we have classified them according to several neologicity criteria.

**Keywords:** corpus linguistics; COVID-19; neologicity criteria; neologisms; swine flu.

**Resumen:** El objetivo principal de este trabajo es estudiar aquellos términos neológicos que se han extendido a través de los medios de comunicación, especialmente a través de los periódicos, durante las épocas de pandemia tanto en periódicos españoles como británicos. Nuestra hipótesis parte de la base de que durante las pandemias de Gripe A de 2009-2010 y COVID-19 en 2020 han surgido una gran variedad de neologismos que se han expandido gracias a los periódicos. Utilizando la lingüística de corpus extraemos

y analizamos cuarenta candidatos a neologismos que se han clasificado utilizando una serie de criterios de neologicidad.

**Palabras clave:** COVID-19; criterios de neologicidad; gripe A; lingüística de corpus; neologismos.

## 1. INTRODUCTION AND HYPOTHESIS

How we use language is influenced by the reality surrounding us, which is one of the main reasons why the current pandemic<sup>1</sup> has affected not only our daily lives but also our language. New concepts and new realities, such as facemasks and new vaccines, have appeared, and are now part of our life. All these novelties have been integrated into our language in a fast —and most of the time— uncontrollable way. These two factors, time and control, have created confusion among the population who faces doubts when using different virus nomenclatures for instance.

The COVID-19 pandemic is not the first one this world has suffered. Only during the 20<sup>th</sup> and 21<sup>st</sup> centuries, it is possible to find the polio epidemic of 1916 followed by the Spanish flu in 1918, the H3N2 pandemic of 1968, the HIV/AIDS pandemic during the 1980s and the H1N1 swine flu pandemic between 2009 and 2010 (U.S. Department of Health and Human Services, 2018). However, the COVID-19 one may be making more changes in our language than previous pandemics, probably due to its tremendous impact on our daily lives. Since the World Health Organization (Ghebreyesus, 2020) declared COVID-19 as a pandemic on the 11<sup>th</sup> of March 2020, the number of neologisms coming from specialist fields like medicine, law and statistics has done nothing but grow (Rodríguez-Ponga, 2020: 198). This growth in vocabulary and the specialized character of the new units were already glimpsed by Villar in 2016. The researcher realised that during pandemics the naming of the illnesses and the vocabulary surrounding them became more specialised (Villar, 2016: 274-275).

Our research aims to study the impact that influenza A (H1N1) and COVID-19 have had on our language mainly focusing on the neologisms these pandemics brought to our daily usage of language. We hypothesize that, in the past fifteen years, a wide number of neological terms related to the health sphere have spread in newspapers due to the outbreak of several pandemics and health crises. We believe that this phenomenon has occurred both in the United Kingdom and in Spain but we hypothesize that there might be differences between countries. Our main objective is to compare and contrast the neological units extracted and classified from the Spanish corpus and the British corpus to see the differences or similarities that might appear. To do so, we use the

1. This paper was written during the academic year 2021/2022 and by the submitting date in June 2022 the pandemic had not yet been declared finalised.

most popular newspapers of each country which can be considered as the written record of the changes that take place in society. *Neologism* and *neology* do not have the same status nor have they been developed equally in Spain and in the United Kingdom, which is why studying English neologisms from a different perspective can provide interesting data about the behaviour and the spreading of new concepts and terms.

## 2. THEORETICAL FRAMEWORK

The concepts of *neologism* and *neology* appeared in English during the Enlightenment as a borrowing from French (Clauzure, 2003, in Kerremans, 2016: 16). The term was used by Lord Chesterfield who created a dictionary for the elite, which for the first time included not only borrowings from classical languages like Greek or Latin but also new English words (Kerremans, 2016: 16). As happened in French and Spanish, the concept of neologism acquired negative connotations during the 18<sup>th</sup> century.

The first studies interested in neology started in the second half of the last century, particularly in France, where the first discussions about this topic took place. It was in those discussions held by the *Conseil International de la Langue Française* that famously recognised linguists like Guilbert, Rey and Lefèvre among others remarked on the importance of an institutionalised area of studies for neology (Guerrero, 2016: 57).

However, not every country has developed this discipline at the same level nor has provided it with the same status, organising specialized congresses or creating tools to study neologisms. In Spain, it is not until 1989 that the study of neology becomes institutionalized and systematic thanks to Cabré and the creation of the *Observatorio de neología* in Barcelona (Guerrero, 2016: 58). Research has not stopped since then and nowadays the last studies focus on applying cognitivism to this linguistic area. In the case of the English language, although one of the most famous neologists, John Algeo expressed that «the history of English lexicography begins with the study of neology» (1993: 281), certain aspects of the field have remained neglected in British theoretical linguistics. This has mainly been due to the overlapping with neighbouring disciplines like lexicography, sociolinguistics or psycholinguistics (Renouf, 2007: 86) and to the lack of adequate empirical tools (Kerremans, 2016: 17).

### 2.1. Definition of Neologism

Neology as a discipline has been defined by Cabré as the «subject which deals with aspects relating to new phenomena appearing in the language» (Cabré, 1993: 443). Although her definition seems to be too general, it does serve as a starting point for this study focused on lexical neology. Lexical neology is concerned with the creation of new

words with new forms and meanings, as well as with the creation of new meanings for pre-existing forms (Guerrero Ramos, 1995: 19, in Méndez Santos, 2011: 27-28).

There have been several attempts to define what a neologism is, and the perspective taken to define it has not always been the same. In 1843, Mora stated in his first speech as an academic from the Real Academia Española that neologisms were «an evil creation, a desecrator of holy things» (Guerrero, 2016: 58). However, it is now defined in the Diccionario de la Lengua Española as «new word, meaning or expression in a language» (2022: online). In the Oxford English Dictionary, the term is defined as «a newly coined word or expression» (Lexico, 2022).

In the case of English researchers, their main concerns are related to the durability, conventionalization, and inclusion in dictionaries of neologisms (Kerremans, 2016: 17). Aspects that can be seen mentioned in the definition provided by Kerremans:

Neologisms in this study are defined as form-meaning pairings [...] that have been manifested in use and thus are no longer nonce-formations, but have not yet occurred frequently and are not widespread enough in a given period to have become part and parcel of the lexicon of the speech community and the majority of its member (Kerremans, 2016: 31).

These definitions serve as a starting point for understanding the differences between the studies on neology in England and Spain. The complexity of studying neologisms is undeniable and requires a multidisciplinary approach because neolinguists have to track new words but they also have to study their linguistic behaviour and their relation to other linguistic phenomena (Kerremans, 2016: 17). The novelty of our study is that both English and Spanish neologisms will be analysed with a combination of principles that will allow us to reach the object of study from a multidimensional perspective. For this paper, the definitions of *neology* and *neologism* that we will use are the ones proposed by Vega and Llopart in 2017 because they combine the perspectives given by several researchers:

El **neologismo** es, por un lado, el producto resultante de dicho proceso de creación, esto es, la nueva una unidad léxica, que, como apuntan Varo Varo, Díaz Hormigo y Paredes Duarte, puede ser reciente en: signifiante y significado, solo en su signifiante, solo en su significado o tomada de otra lengua, y, por otro, el objeto de estudio de la disciplina neológica, que es, a su vez, el producto resultante de dicho proceso de formación léxica (Vega and Llopart, 2017: 1420-1421).

## 2.2. Types of Neologisms

For some English researchers, lexical neology is circumscribed to the creation of new words that draw on traditional word-formation devices (Lehrer, 2009: 628). That may be the reason why Lehrer (2009: 628-629) established different categories

depending on their formation device: compounding, affixation, conversion, clipping and acronyms, and blends.

Nevertheless, Spanish researchers identify different types of neologisms depending on their formation, and the classification of neologisms becomes a much more complicated affair due to the lack of conceptual stability. Cabré (1993) proposed a classification of neologisms depending on their belonging to the language, their function and their creation. These criteria for lexical neologisms have been developed and further specified by Méndez (2011): form, means of incorporation into the language, function, field, and origin.

### 2.3. Neologicity Criteria

Even though the notion of neologism lacks conceptual stability, researchers have identified several criteria to determine the neological nature of lexical units (Llopart *et al.*, 2014: 1). According to Rey: «Neology is, in theory, a clearly defined concept. But the characterisation of a term as neological is not an easy task if reference points are not previously established, being always these reference points to some extent, arbitrary» (Rey, 1988, in Cabré, 1993: 445).

Several criteria have been identified to determine if a unit can be considered a neologism, which is our main objective in this paper. Depending on the perspective of the study, whether it is cognitive or lexicographic research, the criteria vary. Among the most common criteria, which almost every researcher takes into consideration, it is possible to find these proposed by Cabré (1993: 445):

- a) diachronic criteria: the unit has to be recent;
- b) lexicographic criteria: the unit has to be absent from the dictionary;
- c) systematic instability criteria: the term has to present formal or semantic instability;
- d) psychological criteria: the speaker has to perceive the unit as a novelty.

The classification with these criteria presents difficulties because it is complex to specify the particularities of each one. For instance, depending on the researcher and their perspective, the concept of «recent» can be different. It is also worth mentioning that these criteria are not mutually exclusive, all of them add particular values when considering if a term is a neologism or not.

We will base this paper on the three neologicity criteria established by Estornell (2009):

- a) Chronological: a unit will be considered neological if it has been created in the last five years (Estornell, 2009: 75). This specificity helps systematize the criteria already established by Cabré in 1993.
- e) Lexicographical: if a unit does not appear in a descriptive or prescriptive dictionary, it can be labelled as a neologism.

- f) Spreading of use: a neological unit will be labelled as such if it is only used by a few people and it is present in at least two different documents in the CREA<sup>2</sup> corpus, the BOBNEO<sup>3</sup>, a bank of neologisms, and preferably is also present in the press (Estornell, 2009: 123-234).

There are two main reasons why this study uses the criteria established by Estornell (2009). On one hand, the thesis in which Estornell exposes these criteria uses neologisms that come from the press, just like our study, so the criteria can be easily recognized in the same type of text. On the other hand, Estornell limits the chronological and spreading of use criteria, allowing the quantitative study to be more precise and less arbitrary.

However, it is also worth mentioning the criteria established by Méndez (2011). Her criteria are also extremely useful to complete the neologism analysis that we are conveying. This author proposes the degree of scattering in the use of a neologism. This criterion considers a unit as a neologism when it is not limited to the group of people who created it. In order to study this degree of scattering it is necessary to find the unit on more than one newspaper page, on different days or in different media (press, television, radio etc.) (Méndez, 2011: 27). This criterion avoids considering neologisms units that are «creations that may be the sporadic result of the news of the day or the creativity of a journalist from a particular newspaper» (Méndez, 2011: 27).

The systematic instability and the psychological criteria proposed by Cabré (1993) cannot be dismissed from this research. Talking about systematic instability can contribute to useful information due to the corpus particularities and the period we are studying. Pandemics are moments in which information changes every day and at an extreme speed due to the circumstances. That is why studying the systematic instability can express quantitatively the confusion feeling suffered by the population.

It is not difficult to realise that there are many different perspectives and criteria available to classify neologisms through the Spanish branch of the discipline. This is an aspect that we have not been able to identify in English neology where, as we have already mentioned, the main focus is set on the durability of the new concepts, their conventionalization (Kerremans, 2016: 17) and the set of factors that might interfere with this process, identified by Lehrer as inhibiting factors (2007). Not all neologicity criteria work equally, not all of them can be applied to the same types of neologisms, and not all of them have the same weight when comparing them. It is also worth mentioning that a unit can be considered a neologism without fulfilling every single criterion. Neologisms should be studied from a holistic perspective because a single criterion is not enough to determine whether a unit is in fact a neologism (Méndez, 2011: 29).

2. Real Academia Española (1975-2004). *Corpus de referencia del español actual* (CREA) [Computer software]. [Online] Available at <https://corpus.rae.es/creanet.html>

3. Observatori de Neologia (1989- ). *Banc de dades dels observatoris de neologia* (BOBNEO) [Computer software]. [Online] Available at <http://bobneo.upf.edu/>

### 3. METHODOLOGICAL FRAMEWORK

This study is based on the corpus linguistics methodology. An approach that allows gathering empirical data on a subject that might seem subjective at first sight. By using tools like *ReCor*<sup>4</sup> and *AntConc*<sup>5</sup>, we can study in depth the texts we have obtained from the newspaper's archives. With these tools and the in-depth analysis, we can gather information about the neologisms that appear during pandemics, but we are also able to contrast these neologisms and data with the control corpus composed of pieces of news from years without a pandemic.

#### 3.1. Corpora Compilation

Both the Spanish and the British corpora have been compiled thanks to the archives of the most-read newspapers of each country in 2020. For both countries, we have used the same study by the company *Statista* and we have used the data from 2020 because the 2021 research had not yet been published by the time we started to conduct this research<sup>6</sup>. It is also worth mentioning that we have dismissed the most read newspapers that were only focused on sports like *As*, and *Marca* in Spain, and the British newspapers whose archive was not available for consult such as *Metro*. The Spanish corpora are then composed of pieces of news from *El País*, *El Mundo* and *La Vanguardia*, whereas the English one is based on *The Guardian*, *The Daily Mail* and *The Times*.

These newspapers have been selected not only because they are among the most read ones, as the studies by *Statista* reveal (Orús, 2020; Watson, 2021), but also because the language of the press, also called *journalese*, constitutes a register of its own and has an effect on the introduction of new word-formations into the standard language (Fischer, 1998: 68). The press not only adopts and uses new words that have already been institutionalised but also introduces new word forms that are not yet part of the norm (Fischer, 1998: 69). This is the main reason why we have decided to use newspapers to study the neologisms that appear during pandemics, the press can be a clear example of society's real use of the language and a written record of the changes that happen in society. Besides, the selected newspapers represent English and Spanish standard language, which, according to Fischer, «attempt to report factually avoiding sensationalism and emotionally-charged language», and «represent a large amount of data relatively homogeneous in its linguistic material» (1998: 71).

4. LEXYTRAD (2007). *ReCor* [Computer software]. [Online] Available at <http://www.lexytrad.es/es/recursos/rekor-2/>

5. Anthony, L. (2022). *AntConc* (Version 4.1.4) [Computer software]. [Online] Available at <https://www.laurenceanthony.net/software>

6. The research for this paper began in September 2021.

Our corpora and subcorpora are divided as follows:

- a) PAND
  - a. PAND\_EN: English
    - i. PAND\_EN\_0910: swine flu pandemic from June 2009 when the WHO declared the pandemic, to June 2010, when the pandemic was formally finished (Chan, 2009)
    - ii. PAND\_EN\_20: COVID-19 pandemic from January until December 2020
  - b. PAND\_ES: Spanish
    - i. PAND\_ES\_0910: swine flu pandemic from June 2009 when the WHO declared the pandemic, to June 2010, when the pandemic was formally finished (Chan, 2009)
    - ii. PAND\_ES\_20: COVID-19 pandemic from January until December 2020
- b) CONTR: texts from 2007 and 2018 as years that precede the pandemics, and 2011 because it is posterior to the swine flu pandemic.

From each year, we have selected two random pieces of news per month, adding up to 144 pieces of news in each subcorpus (PAND\_ES and PAND\_EN) and giving us a total of 288 texts, which belong to the different newspaper sections: News, Opinion, International, Economy, etc. For the control corpora, we have not included pieces of news from 2021 or 2022 because the pandemic is still going on while this paper is being written and it has not been declared terminated.

The corpus linguistics methodology requires the corpora to be representative. That is why we have used the program *ReCor* created in 2015 by Corpas and Seghiri to determine whether our corpora are representative after compiling them. The program analyses the corpora utilizing an N-Cor algorithm to detect when, even if the number of texts grows, the number of representative words will not vary (Seghiri, 2014: 89). On one hand, the representativeness of the main corpus (PAND) given by *ReCor* allows us to see how it tends to get stabilized when it reaches 150 documents and 190,000 tokens. On the other hand, the control corpus (CONTR) stabilizes when it reaches 200 documents and 170,000 tokens. We have also checked the representativeness of the sub-corpora. The data provided by this program allows us to trust that the results obtained from our corpora will be representative.

### 3.2. Identification of Neologism Candidates

We have used *Terminology Extraction Suit*<sup>7</sup> to extract neologism candidates. However, it is worth mentioning that we have studied each sub-corpus individually to be able to compare not only the years with and without a pandemic, but also the

7. Oliver, A. (2013). *Terminology Extraction Suit* [Computer software]. [Online] Available at <https://sourceforge.net/projects/terminology-extraction-suite/>



differences and similarities between Spanish and English, and between the swine flu and the COVID-19 pandemics.

Based on the list of candidates, we have selected the 25 terms of each sub-corpus with the highest frequency to analyse them. With this list of neologism candidates, we have been able to appreciate how during pandemic years the most frequent words in the news are those related to illnesses, treatments, and the health care system. However, when there is not an ongoing pandemic, we have been able to identify that the frequent terms are related to the economy (*deficit exterior* and *rescate* from the Spanish corpus, and *stock market* in the English corpus), to the climate crisis (*cementerio nuclear* and *cambio climático* from the Spanish corpus, and *fossil fuel* and *net-zero emissions* in the English corpus) and social movements (*black lives matter movement*, *palm oil* from the English corpus, and *reforma Bolonia* in the Spanish corpus).

After careful consideration, we have selected ten candidates for each pandemic and each language to analyse whether they can be classified as neologisms or not. The 40 candidates have been selected following certain criteria that we have established:

- a) The units only appear in one of the two sub-corpora of the same language.
- b) The units do not contain the adjective «new» because it is not significant diachronically.
- c) The units are not repeated exactly in the list with just a capitalization difference.
- d) The unit is not an abbreviation of an institution.

These are the reasons why the selected candidates from the English subcorpus are as follows: *antenatal*, *antiviral drug*, *chief medical officer*, *coronavirus tracing app*, *covid-19 (en)*, *Covid-19 vaccine*, *critical illness*, *death toll*, *face mask*, *flu vaccine*, *H1N1 vaccine*, *H1N1 virus*, *intensive care unit*, *lithium carbonate tablets*, *lockdown*, *social distancing*, *swine flu*, *travel corridor*, *underlying risk factors*, and *vaccine trial*. On the other hand, the selected candidates from the Spanish subcorpus are: *campana de vacunación*, *cepas*, *coronavirus (es)*, *covid (es)*, *covid-19 (es)*, *curva de contagios*, *epidemiólogos*, *gripe A/H1N1*, *gripe aviar*, *gripe convencional*, *gripe porcina*, *grupos de riesgo*, *medidas de protección*, *nueva normalidad*, *pasaporte serológico*, *repunte de casos*, *tratamiento con transfusiones*, *variantes del virus*, *vacuna trivalente*, and *virus H1N1*.

### 3.3. Neologisms Classification

#### 3.3.1. Neologicity Criteria

After researching the available literature about neologism and neologicity criteria, we have decided that the most suitable approach for this study is to combine the criteria proposed by different authors. By combining several criteria, we avoid some of the limitations that using only one criterion can bring to the study. Besides, this also allows

us to have a wider picture of the behaviour of the candidates to become neologism. These are the main reasons why the classification we have used is as follows:

CRITERION	AUTHOR	DEFINITION
Lexicographic	Estornell (2009: 125)	The unit should not appear in a descriptive or prescriptive dictionary.
Chronological	Estornell (2009: 125)	The unit should have been created in the past five years.
Spreading of use	Estornell (2009: 127)	The unit should be present at least in two different texts in the CREA and BOBNEO corpora, and preferably in another text from the press.
Systematic instability	Cabré (1993: 445)	The unit should present formal or semantic instability.
Scattering in use degree	Méndez (2011: 27)	The unit should not be limited in use to the group that coined it, so it should be documented in more than one newspaper, on different dates, or in different media.

With the forty neologism candidates and the neologicity criteria selected, we have studied if each of the candidates fulfils the criteria to be a neologism. First, it is necessary to establish the frequency of each candidate, which is why we have used the frequency list provided by *Terminology Extraction Suit*. Besides, we have also considered the context of use that the unit has, which is why we have selected one context per candidate from those provided by the program *AntConc*. This is the same program we have used to determine the scattering in use degree because it provides the publication data thus allowing us to establish in which newspaper and on which date was it published.

To study the lexicographic criteria, we have searched the units from the Spanish sub-corpora in the *Diccionario de la Lengua Española (DLE)* by the Real Academia Española (2021), and the ones from the English sub-corpora in the Oxford English Dictionary Online *Lexico* (2022). Those units that do not appear in these descriptive dictionaries have been searched in specialized dictionaries such as the *Diccionario de términos médicos* by the Real Academia Nacional de Medicina de España (2012) and the *Merriam-Webster Medical Dictionary* (2022). There have also been cases of units that appear in none of the already mentioned dictionaries. As we believe that it is necessary to define in order to comprehend fully a concept, we have also used the specialized websites of the Centers for Disease Control and Prevention (CDC, 2022),

the World Health Organization (WHO, 2022), the National Health Service (NHS, 2022), and the Government Services and Information of the United Kingdom (GOV.UK, 2022)<sup>8</sup>.

For studying the chronological criteria, we have used several reference corpora that provide information on the first known use of the unit. The selected reference corpora for the Spanish terms have been:

- a) Corpus de Referencia del Español Actual (CREA);
- b) Corpus del Español del Siglo XXI (CORPES XXI)<sup>9</sup>;
- c) BOBNEO.

In the case of the English terms, we have selected:

- a) Oxford English Corpus<sup>10</sup>;
- b) WebCorp<sup>11</sup>.

That is how we have been able to determine if the candidates have been created, or have appeared in the last five years. Additionally, we have also considered the dates of the different pieces of news from our *ad hoc* corpora. These same reference corpora have also been used to determine the spreading of use because according to Estornell (2009), the units should be present in at least two different reference corpora and the press. This last requirement is already fulfilled by all of our candidates so we have prioritised its presence in the CORPES XXI and the BOBNEO neologism bank for the Spanish candidates, and the presence in WebCorp for the English candidates.

The systematic instability of the candidates has been studied within our corpora, searching for formal or semantic instability of the units by finding synonyms, different spellings, a variety of capitalizations in the illness denomination, and different units that refer to the same concept.

8. We have decided to use these specialized dictionaries and webpages to study whether the candidates that do not appear in descriptive dictionaries such as the *DLE* or the *OED* can be classified as trivialized *neonim*, specialized units that have suffered a process of banalization to become part of the general language.

9. Real Academia Española (2013-2021). *Corpus del Español del Siglo XXI* (CORPES) [Computer software]. [Online] Available at <https://apps2.rae.es/CORPES/view/inicioExterno.view;sessionId=6C97A1FFAEEDBD4FB0216D388CE50D7D>

10. Oxford University Press (2011). *Oxford English Corpus* (OEC) [Computer software]. [Online] Available at <https://www.sketchengine.eu/oxford-english-corpus/>

11. RDUES (1999-2022). *WebCorp* [Computer software]. [Online] Available at <https://www.webcorp.org.uk/live/index.jsp>

## 4. RESULTS AND DISCUSSION

### 4.1. Neologicity Criteria Compliance

The following table (Table 4) summarizes the results that we have obtained after analysing the neologicity criteria:

Term	Lexicographic criteria		Chronological criteria	Scattering	Systematic instability	Spreading of use				
	SPE	GER				CREA	CORPES	BOBNEO	VerbCorp	OEC
<i>campana de vacunación</i>	X	—				X	—	—	—	—
<i>cepas</i>	X	—				X	—	—	—	—
<i>Coronavirus (es)</i>	—	X				X	X	X	—	—
<i>Covid (es)</i>	—	X				—	X	X	—	—
<i>Covid-19 (es)</i>	—	X				—	X	X	—	—
<i>curva de contagios</i>	—	—				—	—	X	—	—
<i>epidemiólogo</i>	—	X				X	X	—	—	—
<i>gripe A/H1N1</i>	X	—				X	—	—	—	—
<i>gripe aviar</i>	X	—				X	—	X	—	—
<i>gripe convencional</i>	—	X				—	—	—	—	—
<i>gripe porcina</i>	X	—				—	—	X	—	—
<i>grupo de riesgo</i>	—	—				X	—	X	—	—
<i>medidas de protección</i>	—	—				X	—	—	—	—
<i>nueva normalidad</i>	—	—				X	—	X	—	—
<i>pasaporte serológico</i>	—	—				—	—	—	—	—
<i>repunte de casos</i>	—	—				—	—	—	—	—
<i>tratamiento con transfusiones de plasma</i>	—	—				—	—	—	—	—
<i>vacuna trivalente</i>	X	—				X	—	—	—	—
<i>variantes del virus</i>	X	—				X	—	—	—	—
<i>virus H1N1</i>	X	—				—	—	—	—	—
<i>swine flu</i>	—	X				—	—	—	X	X
<i>intensive care unit</i>	—	X				—	—	—	X	X
<i>flu vaccine</i>	X	—				—	—	—	X	X
<i>H1N1 virus</i>	X	—				—	—	—	X	X
<i>chief medical officer</i>	—	X				—	—	—	X	X
<i>antenatal</i>	—	X				—	—	—	X	X
<i>death toll</i>	—	X				—	—	—	X	X
<i>critical illness</i>	—	X				—	—	—	X	X

Term	Lexicographic criteria		Chronological criteria	Scattering	Systematic instability	Spreading of use				
	SPE	GER				CREA	CORPES	BOBNEO	VerbCorp	OEC
<i>antiviral drug</i>		X				—	—	—	X	X
<i>H1N1 vaccine</i>	X	—				—	—	—	X	—
<i>social distancing</i>	—	X				—	—	—	X	X
<i>vaccine trial</i>	—	—				—	—	—	X	X
<i>Covid—19 (en)</i>	—	X				—	—	—	X	—
<i>lockdown</i>	—	X				—	—	—	X	X
<i>lithium carbonate tablets</i>	X	—				—	—	—	X	—
<i>coronavirus tracing app</i>	—	—				—	—	—	X	—
<i>Covid—19 vaccine</i>	—	—				—	—	—	X	—
<i>travel corridor</i>	—	—				—	—	—	X	X
<i>face mask</i>	—	X				—	—	—	X	X
<i>underlying risk factors</i>	—	—				—	—	—	X	X

Table 4: Neologicity criteria results

Key: purple = satisfied criteria, red = not satisfied criteria, green = the criteria need to be compared with other criteria, white = not studied criteria, SPE = specialized dictionary, GEN = general dictionary, X = registered unit, and — = not registered unit

In this research, we have considered as a descriptive normative dictionary the *DLE* (Diccionario de la Lengua Española) for the Spanish lexical units and the *OED* (Oxford English Dictionary) for the English ones. This is why the units that appear in these general dictionaries (GEN) have not satisfied the lexicographic criteria. These units are: *coronavirus (es)*, *covid (es)*, *Covid-19 (es)*, *epidemiólogo*, *gripe convencional*, *swine flu*, *intensive care unit*, *chief medical officer*, *antenata*, *death toll*, *social distancing*, *Covid-19 (en)*, *lockdown*, and *facemask*. We have considered that the units that only appear in specialized dictionaries (SPE) such as the *DTM* (Diccionario de Términos Médicos) and the *Merriam-Webster Medical Dictionary* and the ones that do not appear in any of them fulfil the lexicographic criteria. *Critical illness* and *antiviral drug* have been marked in green because although they appear in the *OED*, their definitions are too wide and unspecific to consider and they do not satisfy the criteria, so they have to be balanced with the rest of the results. The comparison between units present in general dictionaries and specialized ones has allowed us to establish the units that only appear in specialized dictionaries as *neonims* that have suffered a process of trivialization to be part of the general language.

Out of the 40 candidates, 35 units appear in at least one of the reference corpora, but only 14 of them fulfil the chronological criteria because they have appeared in the past five years. These units are *covid (es)*, *Covid-19 (es)*, *curva de contagios*, *gripe porcina*, *grupo de riesgo*, *nueva normalidad*, *antiviral drug*, *Covid-19 (en)*, *lockdown*,

*lithium carbonate tablets*, *coronavirus tracing app*, *Covid-19 vaccine*, *travel corridor*, and *facemask*. However, *coronavirus*, *intensive care unit*, *death toll*, and *social distancing* which also appear in at least one of the reference corpora have been previously registered but have been marked in green because they tend to refer to different concepts. For instance, *coronavirus* has been registered in reference corpora since 1998 but it did not refer to the SARS-CoV-2 variant but to the family of virus *Coronaviridae*. Something similar occurs with *death toll*, although the unit was registered in 1996, the few references that do not belong to 2020 and 2021 refer to wars and climate catastrophes. We have evaluated the chronology of the five units that do not appear in any corpora employing our corpora and the dates of the pieces of news in which they appear, and they have been marked in green to analyse them further.

As for the result of the scattering criteria, it is worth mentioning that almost all the 40 units fulfil the criteria because they have been registered in more than one newspaper, more than one piece of news and on different dates on our different corpora. However, the following nine units, which appear to have been used in only one newspaper do not fulfil the criteria: *curva de contagios*, *pasaporte serológico*, *repunte de casos*, *vacuna trivalente*, *antenatal*, *critical illness*, *lithium carbonate tablets*, *coronavirus tracing app*, and *travel corridor*.

Regarding the systematic instability criteria, we have searched the units in our corpora to find synonyms, different spellings, etc. and we have determined that out of the 40 candidates, 22 of them present some sort of variation, which does not mean that outside our limited corpora the rest of the units might not present also a certain instability. It is worth mentioning here the cases of *antenatal*, *lockdown*, and *coronavirus tracing app*. These three units have been marked in green because their systematic instability presents some particularities. Although *unborn*, *quarantine* and *NHS-tracing app* present some conceptual differences with their correspondents; they have been used as synonyms most likely due to a process of banalization of the concepts.

In the case of the spreading of use criteria, we have marked the units that appear in the different reference corpora CREA, CORPES, BOBNEO, WebCorp, and OEC. Of the 40 units, five of them appear in none of the reference corpora: *gripe convencional*, *pasaporte serológico*, *repunte de casos*, *tratamiento con transfusiones de plasma*, and *virus H1N1*, so consequently they fail the criteria. The units only registered in the CREA corpus also fail the criteria because of the lack of updating of this particular corpus. Regarding the English units, we have considered that those that do not appear in the OEC and have less than 50 appearances in WebCorp do not fulfil the criteria either. A consideration that affects *H1N1 vaccine*, *Covid-19 (en)*, *lithium carbonate tablets*, and *coronavirus tracing app*.

As it has been possible to see through the analysis of these neologism candidates, not all the candidates succeed in all the criteria, something already indicated by Méndez (2011: 29). Not all the criteria can be equally applied to all the different units, a global vision of the candidates is required to establish its neologicity value. In the case of our research, out of the forty units studied, we have excluded the following fifteen because once we look at all their neologicity criteria results as a whole; they do not fulfil a minimum of criteria to be classified as a neologism. The excluded units are *campaña*

*de vacunación, cepas, epidemiólogo, gripe aviar, grupo de riesgo, medidas de protección, variantes del virus, intensive care unit, chief medical officer, antenatal, critical illness, vaccine trial, lithium carbonate tablets, face mask, and underlying risk factors.*

As for the units that we do consider to be neologism we have identified 25 of them: *coronavirus (es), coronavirus tracing app, covid (es), Covid-19 (en), Covid-19 (es), Covid-19 vaccine, curva de contagios, death toll, lockdown, nueva normalidad, pasaporte serológico, repunte de casos, social distancing, tratamiento con transfusions, and travel corridor.*

It is worth mentioning that only ten of the units belong to the swine flu pandemic, leaving the other fifteen as part of the COVID-19 pandemic. Some of the units are related to the actual names of the illnesses: *coronavirus (es), Covid-19 (es), covid-19 (en), Covid-19 (en), gripe A/H1N1/, swine flu, H1N1 virus.* This naming variation is significant for the study because it can be showing a preoccupation with describing the situation that affects society. Besides, it is possible to see a correspondence between the Spanish and English terms regarding the denomination of the pandemics: *swine flu* and *gripe porcina*, as well as *covid-19 (en)* and *covid-19 (es)*. These coincidences might be due to the similar effect that the pandemics have had in both countries. It is also possible to appreciate that the number of neologisms that we have found is almost the same in both languages: thirteen belong to Spanish corpora and twelve to English ones.

On the other hand, it is also significant that many neologisms are related to treatments for the virus (*antiviral drug, flu vaccine, H1N1 vaccine, tratamiento con transfusions, and vacuna trivalente*). Something that indicates the relevance and the necessity for cures to end these pandemics. The same occurs with the neologisms that refer to the consequences of the pandemics in our daily lives (*coronavirus tracing app, curva de contagios, death toll, lockdown, nueva normalidad, pasaporte serológico, repunte de casos, social distancing, and travel corridor*). Data indicates that pandemics did affect society in aspects such as personal relationships, travel, economy, etc.

## 5. CONCLUSIONS

Our paper was based on the main hypothesis that in the past fifteen years, a wide number of neological terms related to the health sphere has spread in newspapers due to the outbreak of several pandemics and health crises such as the swine flu in 2009-2010, and the COVID-19 in 2020 (which continues at the time of writing this paper). We believed that this phenomenon of neologisms spreading toward the common language was taking place in both Spain and the United Kingdom, and through our study, we have been able to prove this point right as part of our objectives. In both countries we have been able to identify a significant number of neologisms related to pandemics: out of the forty units studied, twenty-five were identified as neologisms and both countries have a similar number of neologisms, Spain has thirteen whereas the United Kingdom has twelve.



However, our main hypothesis also believed that there might be differences in the number or type of neologisms in each country's newspaper, and this part of the hypothesis has proven incorrect for the sample studied. The number of neologisms is almost the same; we can only appreciate one more neologism in Spanish than in English. We have realised that the Spanish and English neologisms have more elements in common than differences. Additionally, we have also realised that it is possible to apply the neologicity criteria developed by Spanish researchers to English neologisms. This is an innovative perspective that has allowed us to study the process of creating and spreading of neologisms in two different countries with two different languages.

What we have been able to analyse has been a consistent series of differences between the neologisms that appeared during the swine flu pandemic and the ones that belong to the COVID-19 one. Through all the criteria, we have been able to find more COVID-19 neologisms. It is also interesting to mention that the neologisms belonging to the actual pandemic can be classified into several categories such as names of the virus and the illness, possible treatments, and aspects that the pandemic has brought to our lives as consequences (*nueva normalidad*, *pasaporte serológico*, *social distancing*). This difference with the swine flu pandemic, whose neologisms are reduced to names of the virus and vaccines, can be used as an indicator of the higher impact of COVID-19 not only in our lives but also in our language.

Our conclusions about the similarities between the behaviour of two languages, Spanish and English, when regarding neology during pandemics, despite our hypothesis about the likelihood of founding more differences, have been enlightening. In this period of globalization, both countries and the entire world have suffered from the pandemic and their languages have reflected society's concerns similarly. In the words of Simpson «(neologisms) tell us about ourselves and the societies we inhabit» (2007: 148).

This paper and future research would be able to set the base and create the necessary tools that people will need to face and properly understand the new vocabulary that has arisen with the pandemic. Employing the diffusion of knowledge and the creation of resources for everyone, people will be able to face neological change without the doubts and complications that they have faced with the current pandemic.

When considering further research paths, we believe that it would be necessary to use bigger corpora and manual classification of the possible neologisms instead of using automatic tools like *Terminology Extraction Suit*. If this were to be carried out together with surveys of the population, the gathered and analysed data would be more representative of people's concerns and considerations with new words. Although it has not been possible to study the psychological criteria among the neologicity criteria, we believe that the cognitive approach to neology is a very interesting way of obtaining results directly from the public who faces neologisms in their daily lives. However, we do believe that the analysis of neologisms has to be made through a combination of different criteria, proposed by different authors, maybe even considering the *baremo de relevancia neológica* proposed by Sánchez Ibáñez (Sánchez Ibáñez, 2018, in Maroto, 2021: 187) and understanding the multifaceted nature of neologisms. Besides,



it would be worth studying the typology of the different neologisms following Cabré's classification (1993) as well as their conventionalization process proposed by Kerremans (2016) and inhibiting factors proposed by Renouf (2007). This would allow us to determine if despite having many similarities between the British and the Spanish neologisms some differences might be found. This deeper study would provide further information relevant to understanding the creation of the neologisms and their evolution as the pandemics evolve. Studying particular newspaper sections, such as Science, or Health would also provide interesting data for this area of research. Besides, it would also prove that studying neologisms by combining perspectives allows for a deeper understanding of the object in both English and Spanish.

In future research paths, it would be also interesting to redo this study after the COVID-19 pandemic is finally declared finished. This would allow us to see if the neologisms that the pandemic has brought are still present or were an example of fleeting topicality, thus hindering the conventionalization of the units. It would be enlightening to see whether these units have been included or not in dictionaries, or whether they have died from the virus. Desuetude would then be also an interesting feature to study following the theories by Algeo (1993). As Simpson mentions: «New words and meanings evolve, and older ones drift out of use. By concentrating on the new, we half-close our eyes to the old, and to what is happening in the bulk of the language» (2007: 146).

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