

# The #ReframeCovid initiative

## From Twitter to society via metaphor

Inés Olza,<sup>1</sup> Veronika Koller,<sup>2</sup> Iraide Ibarretxe-Antuñano,<sup>3</sup>  
Paula Pérez-Sobrino,<sup>4</sup> and Elena Semino<sup>2</sup>

<sup>1</sup> University of Navarra | <sup>2</sup> Lancaster University | <sup>3</sup> University of Zaragoza

<sup>4</sup> University of La Rioja

From the beginning of the COVID-19 pandemic, governments, health agencies, public institutions and the media around the world have made use of metaphors to talk about the virus, its effects and the measures needed to reduce its spread. Dominant among these metaphors have been war metaphors (e.g. *battles*, *front lines*, *combat*), which present the virus as an enemy that needs to be fought and beaten. These metaphors have attracted an unprecedented amount of criticism from diverse social agents, for a variety of reasons. In reaction, #ReframeCovid was born as an open, collaborative and non-prescriptive initiative to collect alternatives to war metaphors for COVID-19 in any language, and to (critically) reflect on the use of figurative language about the virus, its impact and the measures taken in response. The paper summarises the background, aims, development and main outcomes to date of the initiative, and launches a call for scholars within the metaphor community to feed into and use the #ReframeCovid collection in their own basic and applied research projects.

**Keywords:** COVID-19, pandemic, war metaphors, alternative framings, open-source initiative

### 1. Introduction

Nous sommes en guerre, en guerre sanitaire, certes: nous ne luttons ni contre une armée, ni contre une autre nation. Mais l'ennemi est là, invisible, insaisissable, qui progresse. Et cela requiert notre mobilisation générale.

(Emmanuel Macron, 16/03/2020)<sup>1</sup>

---

1. Full speech available at the Elysée webpage: <http://bit.ly/MacronCOVID>.

<https://doi.org/10.1075/msw.00013.olz>

*Metaphor and the Social World* 11:1 (2021), pp. 98–120. ISSN 2210-4070 | E-ISSN 2210-4097

 Available under the CC BY 4.0 license. © John Benjamins Publishing Company

[We are at war, a sanitary war indeed: we do not fight against an army nor against another nation. But the enemy is there, invisible, unstoppable, spreading. And this requires our general mobilisation.]<sup>2</sup>

Around mid-March 2020, several European leaders addressed citizens in their countries with solemn TV speeches to announce severe measures to try to reduce the alarming spread of the SARS-CoV-2 virus and its associated disease, COVID-19, in Western Europe. Emmanuel Macron (France), Angela Merkel (Germany), Pedro Sánchez (Spain) and Boris Johnson (United Kingdom)<sup>3</sup> added to a previous body of speeches on COVID-19 and its effects delivered by governments of the first countries seriously hit by the virus: China, from January 2020 onwards; and later on, from late February-early March, Italy, where Giuseppe Conte encouraged his compatriots to become “*a country that, thanks to its sense of community, succeeds in winning the battle against the pandemic*” (11/03/2020).<sup>4</sup> Much in the same vein, international health agencies and public institutions framed the new global pandemic as an unprecedented threat to all part of society: “*This is not just a public health crisis, it is a crisis that will touch every sector – so every sector and every individual must be involved in the fight*” (WHO Director-General’s opening remarks at the media briefing on COVID-19; 11/03/2020).<sup>5</sup> Similar linguistic choices were found in political speeches in many other countries where the virus kept spreading later on: for instance, in mid-April, Brazilian President Jair Bolsonaro said he expected the quarantine, “*this way of combating the virus together from home*”, to end up soon (20/04/2020);<sup>6</sup> and, around the same dates, Australian Prime Minister Scott Morrison promised the country: “*We will rebuild and we will restore whatever the battle ahead takes from us*” (08/04/2020).<sup>7</sup>

2. The metaphorical expressions under scope in each case are underlined in discourse examples. English translations are provided in square brackets. Small caps are used for conceptual metaphors, cognitive domains and frames. In Sections 3 and 4, instances from the #ReframeCovid collection are cited with (name of contributor, date, source/author, language).

3. Merkel’s speech (19/03/2020): <http://bit.ly/COVIDMerkel>; Sánchez’s statement (13/03/2020): <http://bit.ly/SanchezCOVID>; Johnson’s statement (16/03/2020): <http://bit.ly/JohnsonCOVID>.

4. “Un paese che, grazie al proprio senso di comunità, è riuscito a vincere la sua battaglia contro questa pandemia”. Full statement available at the Governo Italiano webpage: <http://bit.ly/ConteCOVID>.

5. See <http://bit.ly/WhoCOVID>.

6. “Eu espero que essa seja a última semana dessa quarentena, dessa maneira de combater o vírus, todo mundo em casa”. Excerpts of Bolsonaro’s statements (made in the course of an improvised street interview) are available at <https://bit.ly/COVIDBolsonaro> and <https://bit.ly/COVIDBolsonaro2>.

7. Full statement available at <https://bit.ly/COVIDMorrison>.

This brief overview of the discursive inauguration of the COVID-19 emergency underscores the crucial role of metaphor in talking about, and making sense of, complex and unprecedented events such as the extremely rapid outbreak of a global pandemic. The examples quoted here are only a small sample of the large number of war metaphors in public discourse(s) around the health emergency. The SARS-CoV-2 virus was presented as an “*invisible, unstoppable enemy*” that called for “*fight and battles*” (Conte and WHO Director-General) in what was depicted as a new “*war*” (Macron). However, as will be shown below (see Section 3), other metaphorical frames arose as well in early discourses on COVID-19 in Europe to refer to the spread of the virus and the measures taken in response to it. For example, the curve of technical growth charts was exploited as a powerful figurative anchor (Hutchins, 2005) to summarise the evolution of the pandemic (“*It looks as though we’re now approaching the fast growth part of the upward curve*”, Johnson, 16/03/2020); and the whole enterprise of dealing with the virus was framed as a game or match that would be difficult to win (“*This is a tough game, and it will be a team effort*”, microbiologist Kate Templeton, 25/03/2020).<sup>8</sup> To sum up: from its very beginning, the global understanding of the pandemic was a metaphorical one, much in line with what happened in public discourse during the influenza pandemic of 1918–1919 (Honigsbaum, 2013).

War metaphors in particular have attracted an unprecedented amount of criticism from diverse social agents (linguists, historians, politicians, healthcare workers, commentators and citizens), for a variety of reasons that we will explain in this paper (see Section 2). Within this context, #ReframeCovid was born as an open, collaborative and non-prescriptive initiative to collect alternatives to war metaphors for COVID-19 in any language, and to (critically) reflect on the use of figurative language to frame high-impact, multi-faceted events such as the coronavirus pandemic. In what follows we first offer a comprehensive review of possible explanations for the proliferation of war rhetoric on the pandemic – especially during the first stages of the crisis – and the principal lines of criticism on the use of war metaphors in public discourse and/or discourse of illness put forward by several empirical studies, and by people outside academia (Section 2). We then develop a meta-ethnography of #ReframeCovid in Section 3, with an introduction to the agents involved in this initiative as well as a general overview of the data gathered so far in the #ReframeCovid collection. Finally, in Section 4, we reflect on the challenges and innovative avenues of this crowdsourced endeavour: the

---

8. Excerpt of talk “Diagnostics, tests for COVID19: What are the options?” delivered at the Edinburgh Coronavirus Workshop, 25th March 2020. Full recording available at <http://bit.ly/TempletonCOVID>.

social impact it has had so far, the use of #ReframeCovid data for research purposes, and issues of open-science policy.

## 2. Why #ReframeCovid? (Mis)use of war metaphors in public and health discourse

### 2.1 Communicating an emergency

Communicating an emergency – especially a high-impact one that develops extremely rapidly – is not an easy task. A quick look at the chronology of the coronavirus outbreak suffices to understand that the actual spread of COVID-19 outside Asia (specifically China), where it originated, to Europe took only a few weeks, not even a month.<sup>9</sup> Between January and March 2020, the spread of the virus was subject to almost minute-by-minute media reports worldwide. Yet, governments across the globe – especially in Europe – minimised the potential impact of COVID-19 on Western societies, mainly by comparing the coronavirus with well-known flu viruses, or by invoking the capacity of modern health systems to track and control infection transmission chains. To cite but one example, on 31st January 2020, the Spanish Director of the Coordination Centre for Health Alerts and Emergencies of the Ministry of Health (Fernando Simón), who acts as head of the crisis management board in the country, said: “Pensamos que España no va a tener, como mucho, más allá de algún caso diagnosticado” [We think that Spain will only have – at most – a few confirmed cases] (see <http://bit.ly/SpainSimon>). Only 41 days later, on 13th March 2020, President Pedro Sánchez declared a state of national emergency and, on 14th March 2020, the Spanish Government imposed one of the strictest confinement regimes in Europe.

Within a very short period of time (the first two weeks of March 2020), the same governments were obliged to drastically shift their communication strategy: in mid-March the main aims of public statements and press releases changed to (a) conveying the (sudden) seriousness of the virus spread across countries and (b) calling for unity and responsibility, and convincing citizens to accept unprecedented restrictive measures to lower infection rates. In such a complex context,

---

9. The WHO’s situation report on COVID-19 released on 11th February 2020 (<http://bit.ly/WHOreportFeb>) reported 42,708 confirmed cases in China and only 395 confirmed cases in other countries worldwide. A month later (11th March 2020), the WHO defined the COVID-19 spread as a pandemic, with 80,955 confirmed cases in China and 37,364 cases outside China (<http://bit.ly/WHOreportMarch>). At the time of writing (29th November 2020), COVID-19 has been documented in all inhabited regions of the world, with 61.8 million infections and more than 1.4 million deaths reported to the WHO (<https://covid19.who.int/>).

with politicians and experts changing their *ethos* from week to week, war framings were at hand to pursue these persuasive goals and – more importantly – to try to get a conscious, disciplined response from citizens.

There are other (non-political) reasons why war metaphors apply to a pandemic and its effects. The primary metaphor *DIFFICULTIES ARE OPPONENTS* (Grady, 1997) explains the use of expressions to do with physical combat (of which war is an extreme example) for a wide range of different problems. More specifically, the *ILLNESS IS WAR* metaphor exploits self-evident structural matches between both cognitive domains (Sontag, 1979; Larson, Nerlich & Wallis, 2005; Hendricks et al., 2018: 267–269; Wicke & Bolognesi, 2020), e.g. ‘negative event to which subjects offer some kind of resistance’, ‘risk of death’ or ‘need for a coordinated response’. Moreover, the socio-economic effects of a pandemic are found to be similar to those of a war (e.g. acute increase of death rates; severe economic recession; loss of social wellbeing; psychological effects on individuals and societies). Indeed, some of the structural measures responding to the COVID-19 crisis have resembled those taken in major war conflicts, e.g. calling retired doctors and nurses to come back to support strained healthcare services; urgent construction of field hospitals, in some cases with help from the military; temporary centralisation of political and legal powers. Scholars from various fields have underscored the parallelisms of the current pandemic with well-known consequences of war. Amongst others, Brooks et al. (2020) and Rodríguez-Rey, Garrido-Hernansaiz & Collado (2020) document a substantial increase in cases of post-traumatic stress and depression during lockdown, and economists (Cutler, 2020) predict a long-term international U-shaped recession and recovery – similar to the one undergone by the US after the Vietnam war, for instance – as a result of the global outbreak of COVID-19.

To sum up, there are important reasons – cognitive, material, and rhetorical – why war metaphors are often used for serious public health crises such as the COVID-19 pandemic. And, at least to some extent, these metaphors may be apt and useful to talk about such crises, especially in their early stages. However, war metaphors can also be inappropriate and counterproductive. More precisely, taking *WAR* as a dominant and (almost) exclusive frame to talk about a pandemic throughout all its stages may entail a series of unwanted effects that we will discuss in the following section.

## 2.2 Limitations and drawbacks of the WAR frame in political and health discourse

As stated above, the use of war metaphors in political and health discourses concerning the coronavirus pandemic has received intense criticism, by several social agents and for various reasons. War framings were never unproblematic, though.

On the one hand, the (mis)use of war rhetoric in public discourse has been a recurrent topic in critical discourse studies and interdisciplinary approaches to political communication. Topics addressed in this body of research range from the “wars” on important social threats such as drug trafficking, poverty, crime, terrorism or climate change (see for instance Flusberg, Matlock & Thibodeau, 2017; Ruiz, 2018) to the legitimisation of political action by strategically presenting something/somebody as an enemy that should be fought. For example, presenting the European Union as an enemy of the UK’s socio-economic autonomy and prosperity was a major legitimisation tool of pro-Brexit discourses (Zappettini, 2019). Shortcomings of the (ab)use of war metaphors in public discourse have been summarised by Flusberg, Matlock & Thibodeau (2018). These include (a) structural mismatches between the WAR domain and those usually targeted by public discourse, e.g. political action or social dynamics, which most often escape the logics of victory/defeat and ally/enemy; and (b) the risks of “militarising” the public sphere, thus turning regular socio-political issues (immigration, health management, conflicts between political parties, etc.) into highly stressful events, while at the same time – and quite paradoxically – making people underestimate the seriousness of literal armed conflicts.

The presence of war metaphors in health discourse in particular has been criticised for some of the mentioned reasons as well, namely the distorted cognitive entailments of applying a war logic to the way a patient copes with illness. As Hendricks et al. (2018) and Rojas & Fernández (2015) point out with reference to cancer discourse, the war metaphor inappropriately presents lack of recovering one’s health as a defeat, and conceptualises the body as a battlefield and some of its parts as the enemy. Moreover, there is increasing experimental evidence on unwanted effects caused by war rhetoric in illness contexts. For instance, studies conducted by Hauser & Schwarz (2015) show that subjects exposed to fight and enemy framings of cancer tend to express reduced willingness to adhere to self-limiting behaviour (e.g. avoid certain habits; limit the consumption of certain food and substances) when asked to think of ways to reduce the chances to develop the disease in their lifetime. However, exposure to war rhetoric – i.e. messages stressing power and strength in fighting an enemy – does not result in increasing self-bolstering intentions such as engaging in physical exercise and a varied diet either. Moreover, the experiments run by Hendricks et al. (2018, p.267)

within the MELC project<sup>10</sup> reveal that framing a person's cancer situation as a battle – rather than a journey, for instance – encourages people to believe that that person is more likely to feel guilty if s/he does not recover. Interestingly, journey metaphors are more likely to encourage the inference that the person can make peace with his/her situation than the BATTLE frame does. A full body of research conducted by the same MELC group (see Semino et al., 2018) led to the publication of the *Metaphor Menu for People Living with Cancer*,<sup>11</sup> an open collection of metaphors inspired by different people who have experienced cancer, to be used for personal and professional (non-research) purposes. The *Menu* includes mainly non-war metaphors that frame the illness in innovative and creative ways (e.g. illness is presented as a fairground ride and life after cancer is compared to walking with a stone in one's shoe), and also a set of battle metaphors that are reviewed and reflexively subverted (e.g. *Menu* suggestion number 10: “‘Battle’ suggests either I win or cancer does. I think of it more as ‘working with cancer’”).

Criticism of the dominant use of war metaphors in discourse(s) concerning the coronavirus pandemic has resorted to similar lines of argument. We will refer just to a few examples coming from a range of disciplines and/or social agents.

In academia, war metaphors on the coronavirus have already been analysed as a tool to justify and legitimise unprecedented legislative responses to the pandemic led by governments across the world (Gillis, 2020). Negative psychological effects of COVID-19 war rhetoric on the population have been reported by Sabucedo, Alzate & Hur (2020) and Benziman (2020), including unmet social expectations (e.g. the virus cannot be rapidly beaten but will remain among us for a long time). Finally, studies in Linguistics and (Critical) Discourse Analysis have extensively collected and reviewed transnational war metaphors on the pandemic used by governments, institutional bodies and citizens, very often adding a critical call to moderate their use in the public sphere (among others, see Fernández-Pedemonte, Casillo & Jorge-Artigau, 2020; Rajandran, 2020; Martínez-Brawley & Gualda, 2020; Wicke & Bolognesi, 2020).

In popular media and on platforms for social discussion and spread of scientific findings, journalists, scientists and intellectuals have fostered a critical stance on the public understanding of the pandemic as a war. A few representative examples can be mentioned. In Spain, the mainstream media echoed a press release

---

10. The MELC (Metaphor and End-of-Life Care) project was funded by the Economic and Social Research Council and developed at Lancaster University (UK) by Elena Semino (PI), Andrew Hardie, Veronika Koller, Sheila Payne, Paul Rayson, Jane Demmen and Zsofia Demjen (<http://wp.lancs.ac.uk/melc/>).

11. Available at <http://wp.lancs.ac.uk/melc/the-metaphor-menu/>.

launched by renowned historians in the Hispanic world,<sup>12</sup> who stressed important structural mismatches between the current pandemic and the world wars of the 20th century; and the global platforms *The Conversation* and *Medium* have regularly published articles on the same topic written in many languages and by scholars coming from diverse disciplines.<sup>13</sup>

Ordinary citizens have joined the same stream of criticism sharing their own individual experiences on social media, where a clear prevalence of war metaphors over other figurative frames was indeed reported (see Wicke & Bolognesi, 2020 for a quantitative analysis of a large corpus of tweets posted on Twitter during March and April 2020). For example, healthcare workers – and later on, teachers and professors – have explicitly rejected to be called “heroes” when doing their job,<sup>14</sup> and have alternatively called for underscoring the CARE, SOLIDARITY and SOCIAL RESPONSIBILITY domains. Self-restraining behaviours such as (radical) confinement have been perceived as contradicting the alleged “fight” undertaken by regular people (Hauser & Schwarz, 2015). For instance, Alireza Pakdel’s cartoons on Instagram have received high rates of engagement since March 2020, mainly because they depict people’s homes as spaces for care and security, not as military trenches (e.g. <http://bit.ly/PakdelCovid>). Also, individuals have reported higher levels of anxiety when being exposed to news and political speeches talking about “*being quarantined*” as long as the “*battle*” lasts (Hendricks et al., 2018). See, for example, this tweet by James Rhodes (British pianist established in Spain) and the numerous responses to it: <http://bit.ly/RhodesCovid> (24th March 2020).

---

12. “Historiadores españoles, contra el lenguaje bélico en la enfermedad: « Esto no es una guerra »” [Spanish historians against war language on illness: “This is not a war”]. The press release was issued on 27th April 2020 by Europa Press, one the biggest press agencies in Spain. See <http://bit.ly/EuropaPressCovid>.

13. See for instance: “War metaphors used for COVID-19 are compelling but also dangerous”, by Costanza Musu from the perspective of Public and International Affairs (*The Conversation*, 8th April 2020, <http://bit.ly/TheConversationMusu>); or “No somos juncos” [We are not reeds], published on *Medium* by linguist Raquel Vázquez (also on 8th April 2020; <http://bit.ly/MediumVazquez>).

14. E.g. “No vivimos de los aplausos. No somos héroes, somos personas. Necesitamos mejorar las condiciones laborales” [We don’t live on applause. We are not heroes, we are normal people. Our work conditions must be improved], @MariRodriguez89, nurse in Madrid (Twitter, <http://bit.ly/notheros>).

### 3. Who is behind the #ReframeCovid initiative and what are its main outcomes so far?

#### 3.1 Linguists on Twitter

#ReframeCovid was launched in late March 2020 in the course of a Twitter conversation among linguists based in several countries, whose research interests focus mainly – but not exclusively – on Cognitive Linguistics and Critical Discourse Analysis. As often happens on social media, the initiative developed informally, with a dynamic and spontaneous congregation of users, and progressed along the following milestones.

The conversation was started in Spain by Inés Olza (University of Navarra; Twitter account: @inesolza), with a thread (Figure 1) reacting to an official statement delivered by the Spanish Prime Minister Pedro Sánchez on 22th March 2020.<sup>15</sup> These tweets targeted his overuse of war metaphors and encouraged other Spanish cognitive linguists to feed into an improvised “menu” of alternative metaphors to frame the ongoing emergency, using the *Metaphor Menu for People Living with Cancer* (see Section 2) as a direct source of inspiration.



Figure 1. #ReframeCovid: Initial Twitter thread (22/03/2020). <http://bit.ly/initialthread>

15. Available at <http://bit.ly/SanchezMarch22>. War expressions such as *guerra contra el virus* [war against the virus], *armas* [weapons] and *batalla* [battle] were repeated throughout the entire speech, as also happened in Sánchez's first official statement on the pandemic (13th March 2020; see Section 1).

Linguists mentioned in this first thread – among others, Iraide Ibarretxe-Antuñano (University of Zaragoza; Twitter @iraideia), Laura Filardo-Llamas (University of Valladolid; Twitter @LauraFilardo); and Paula Pérez-Sobrino (University of La Rioja; Twitter @paulapsobrino) – joined the conversation and involved other scholars in it. Many among them had already taken a critical stance on war metaphors about the pandemic on social media and other fora,<sup>16</sup> and so the conversation on Twitter channelled previously existing insights and encouraged new ones under the hashtag #ReframeCovid, created by Paula Pérez-Sobrino (23th March 2020; <http://bit.ly/hashtagcreation>).

The call to contribute non-war metaphors on the pandemic was echoed by Veronika Koller (Lancaster University; Twitter @VeronikaKoller), who set up an open-source document on Google Drive to collect #ReframeCovid metaphors from various languages (Figure 2; <http://bit.ly/ReframeCovid>). Currently the document is managed by her and Pernille Bogø Jørgensen (Lancaster University; Twitter @Pernajl), and comprises contributions by ca. 110 people – mostly linguists and communication scholars – at the time of writing (29th November 2020).



**Figure 2.** Launching the #ReframeCovid collaborative document (24/03/2020). <http://bit.ly/Kollertweet>

Since March 2020, both the collaborative document and the Twitter hashtag have been active thanks to a wide and open community of scholars and citizens listed and credited on the initiative webpage (<http://bit.ly/creditstopeople>). At the time of writing (29th November 2020), the #ReframeCovid hashtag is still alive on Twitter and serves to track the global conversation on metaphors about the

16. For instance, on 17th March 2020 Brigitte Nerlich (University of Nottingham; Twitter @BNerlich) published a long blog post with a critical review of the most frequent figurative patterns used to date in English to frame the pandemic (“Metaphors in the time of coronavirus”, <http://bit.ly/Nerlichpost>). Two weeks before, Elena Semino (Lancaster University; Twitter @elenasemino) had critically quoted an Italian news item on the alleged positive effect of war metaphors in reducing children’s stress caused by the coronavirus (27th February 2020; <http://bit.ly/Seminotweet>).

pandemic. For instance, between 27th March and 2nd April 2020, the hashtag was included in more than 500 interactions among 279 users (data provided by Tweet Binder). In the week between 16th and 21st September 2020, this hashtag was still used in 56 interactions involving 37 contributors (data provided by trackmyhashtag.com).

### 3.2 The #ReframeCovid collection

#### 3.2.1 Overview of the collaborative document

The call to contribute to the #ReframeCovid document was specifically for providing examples of non-war metaphors targeting any aspect of the pandemic (the virus itself, its effects, the agents involved in its spread and control, etc.). Therefore, the structure of the open spreadsheet includes the cells shown in Table 1.

**Table 1.** Structure of the #ReframeCovid spreadsheet. <http://bit.ly/ReframeCovid>

Spreadsheet cells			
(1) Name and email address of contributor	(2) Date of the example	(3) Example (either text or description of visual)	(4) Visual (where applicable)
(5) English translation of example (where applicable)	(6) Source	(7) Author (name, if known, and background: e.g. journalist, politician, etc.)	(8) Language
(9) Source domain	(10) Target domain	(11) Comments	(12) Type of example

Under the last category (12, type of example), entries are classified into the five subcategories shown in Table 2 (figures as of 29th November 2020).

**Table 2.** Type of example: Subcategories. <http://bit.ly/ReframeCovid>

Type of example				
Alternative to war metaphor (470 examples)	Metaphor reversal (35 examples)	Resistance to war metaphors (13 examples)	Non-metaphorical reframing (12 instances)	Other figurative examples (34 examples)

The main category (alternative metaphors) corresponds to what was asked for by the initiative: metaphors avoiding WAR as a source domain – the WAR domain necessarily including the semantic trait ‘organised physical violence between

(political) entities'. However, several #ReframeCovid contributors also proposed other kinds of data that are kept in the collection as related, mostly figurative, examples. Let us illustrate each of these subcategories.

Metaphor reversals take (CORONA)VIRUS/PANDEMIC as source domain for new metaphoric and metonymic mappings as in (1).

- (1) *Η μεγαλύτερη κ πιο επικίνδυνη πανδημία στην Ελλάδα είναι τα ΜΜΕ.*  
 [The media are the biggest and most dangerous pandemic in Greece.]  
 (Anna Vacalopoulou, 09/05/2020, Twitter @Tony95396125, Greek)

Instances of resistance to war metaphor explicitly reject the WAR frame – e.g. via metalinguistic comments – and propose alternative ones for understanding and communicating about the pandemic, as shown in (2).

- (2) *No somos soldados, somos sanitarios. No pegamos tiros, ni llevamos tanques, ni aviones ni barcos, curamos con ciencia. No es ninguna guerra, es una infección vírica.*  
 [We're not soldiers, we're healthcare workers. We don't shoot, nor do we have tanks, airplanes or boats, we cure with science. There is no war, it's a viral infection.]  
 (Barbara de Cock, 19/04/2020, Twitter @McVay3, Spanish)

Proposals to rethink the global health emergency by supporting other non-metaphoric framings are illustrated with Example (3) where staying at home is presented as a key action to overcome the pandemic.

- (3) *Stay home to help us save lives.*  
 (Beatriz Martín Gascón, 04/08/2020, UK National Health System, English)

Other figurative examples include – for instance – the use of WAR framings in counterfactual statements, as shown in (4).

- (4) *If the coronavirus fight is a “war”, Trump has been a disastrous commander in chief.*  
 (Alexandra Nagornaya, 26/05/2020, <https://www.vox.com/>, English)

At the time of writing, the #ReframeCovid collection contains 564 contributions published between 20th January and 5th November 2020 in 30 languages. Figure 3 offers an overview for a breakdown of examples provided in each language.

Besides being multilingual, the collection is also multimodal, with textual and (audio)visual figurative examples drawn from a wide range of genres, from tweets to opinion articles, political speeches, advertisements and visual art. Being crowd-sourced, the collection does not represent a systematically compiled data set. Instead, it provides a broad range of alternatives to the war metaphor and other figurative expressions in the discourse on the COVID-19 pandemic, cutting across languages, semiotic modes, and geographical and cultural contexts. Con-

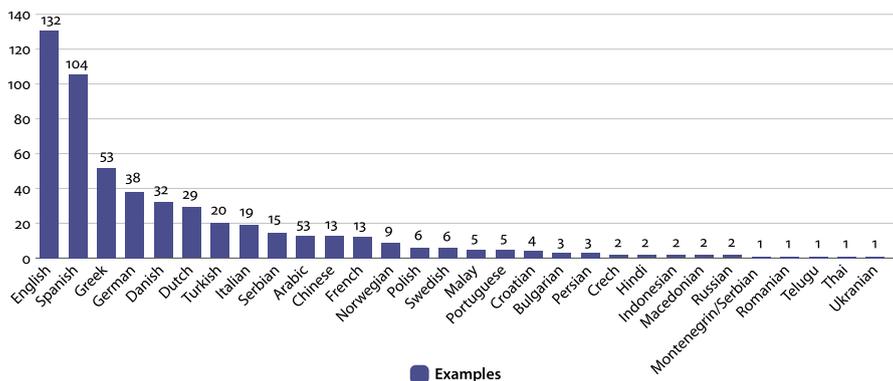


Figure 3. Number of entries by language. <http://bit.ly/ReframeCovid>

tributors chose the examples in response to a call for non-war framings of aspects of the pandemics, collecting metaphors from both traditional and social media to which they had access. While it is impossible to say whether respondents selected the examples because they perceived them as typical and hence representative or, conversely, as non-typical and therefore noteworthy, trends and patterns become apparent as the collection grows in size and scope.

Inevitably, there was no shared approach among contributors for what counted as an instance of metaphor, nor for how to label source and target domains. The examples we have chosen for inclusion in this paper, however, include expressions that would be identified as metaphorical according to the Metaphor Identification Procedure proposed by Pragglejaz Group (2007), or similes and other types of explicit comparison that can be defined as “direct” metaphors (Steen et al., 2010). As for labelling source and target domains, we always began by relying on contributors’ own labels, and only changed them where a more general source domain label would make it possible to point out broader patterns (e.g. a SAILING metaphor as a specific case of a JOURNEY metaphor).

### 3.2.2 Alternative metaphors: Main source and target domains

Within the collection, a majority of non-war examples resort to wide-scope source domains – i.e. domains that can be conventionally applied to many different target domains (Kövecses, 2003) – that are often part of conceptual metaphors for difficult enterprises, challenges and serious problems. Table 3 offers a breakdown of the metaphorical source and target domains contributed to the collection (numbers as of 29th November 2020).

**Table 3.** Number of entries by metaphorical source and target domains in the #ReframeCovid collection. <http://bit.ly/ReframeCovid>

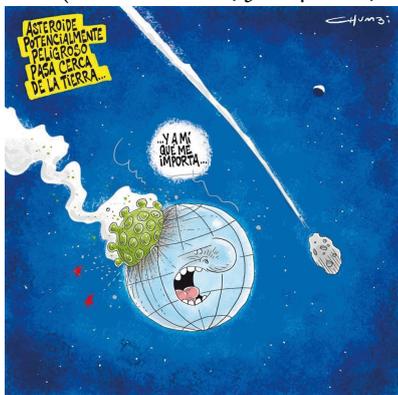
Metaphorical source domain	Number	Metaphorical target domain	Number
JOURNEYS	74, <b>including:</b> – water: 24 – road: 11 – mountain: 11 – air: 3 – rollercoaster: 2 – train: 2	PANDEMIC	234, <b>including:</b> – Measures to contain the pandemic (lockdown, washing hands, social distancing): 51 – reactions to the pandemic: 40 – life during the pandemic: 34 – economic consequences: 8
SPORTS	74, <b>including:</b> – race: 27 – football: 17 – basketball: 2 – cricket: 2 – ping pong: 2 – rugby: 2 – baseball: 1 – golf: 1	VIRUS	30
NATURAL FORCES/DISASTERS	45, <b>including:</b> – storm: 14 – fire: 12 – avalanche: 3 – tsunami: 7 – eruption of volcano: 3 – floods: 2 – hurricane: 2	AGENTS INVOLVED IN VIRUS CONTAINMENT/SPREAD	80, <b>including:</b> – HCP containment: 30 – people containment: 26 – politicians (spread): 3
PEOPLE and ANIMALS (virus animation)	40, <b>including:</b> – animal: 19 – people: 19 – unspecified animated being: 2	Others	126
Others	237, <b>including:</b> – games: 20 – religion: 18 – education: 14 – films: 14		

Among others, the following source domains are well-documented across languages in the collection:

- (1) JOURNEYS: e.g. *to be in the same boat*; *nicht über den Berg sein*, German [not to be over the top of the mountain]; *sacar el barco a flote*, Spanish [to bring a ship afloat].
- (2) SPORTS: e.g. *deadlocked match*; *marathonloper*, Dutch [marathon runner]; *в надпревара с вируса*, Bulgarian [in a race against the virus].
- (3) NATURAL FORCES/DISASTERS: e.g. *tempesta*, Italian [storm]; *tsunami*; *μικρές φωτιές*, Greek [small fires].
- (4) PEOPLE and ANIMALS (virus animation): e.g. virus as a *mugger*, as *ubud og farlig gæst*, Danish [an uninvited and dangerous guest] or *domaća životinja*, Croatian [domestic animal].

The domains targeted by non-war metaphors in the collection are diverse and exhibit different degrees of specificity. They range from the virus itself (Examples (5) and (6); THE VIRUS IS A PREDATOR and AN ASTEROID) to the agents involved in its spread and containment (HEALTHCARE WORKERS ARE SAINTS, Example (7); ORDINARY PEOPLE ARE PLANTS, Example (8), and ANIMALS THAT ARE PREYED UPON, Example (5)).

- (5) *Siedzimy w domach jak w jaskiniach, chronimy się przed drapieżnikiem, jakim jest koronawirus.*  
[We're stuck at homes like in caves in order to protect ourselves from the predator that is the coronavirus.]  
(Justyna Wawrzyński, 27/04/2020, stand-up comedy show, Polish)
- (6) CORONAVIRUS IS AN ASTEROID  
(Lorena Baretto, 30/04/2020, Chumi (Argentinian cartoonist), Spanish)<sup>17</sup>



17. Translation of cartoon caption: [Potentially dangerous asteroid passes close to the Earth]. Earth's reply: [...what do I care?...].

- (7) *Sfintii nostri cei de toate zilele.*

[Our everyday **saints**]

(Alexandra Ciocănel, 14/04/2020, verbo-visual street art campaign by McCann, Romanian)



- (8) *Tenemos las raíces intactas. No lo dudes: **resurgiremos**.*

[Our **roots** are intact. Don't doubt it: we will **revive**.]

(Laura Filardo, 29/03/2020, advertisement by creative studio, Spanish)

The overall “pandemic situation” is frequently targeted as well (Examples (9) and (10), with PAINTING and NAVIGATION as source domains, respectively).

- (9) *Dünyanın büyük kısmında **tablo** bir salgın **tablosudur**. Biz **genel tabloya** kıyasla şanslı durumdayız.*

[In most of the world, the **picture** is the **picture** of a pandemic. We are lucky compared to **the overall image**.]

(Esrancar Efeoğlu-Özcan, 16/03/2020, political speech, Turkish)

- (10) *си́гурно ќе ја **пребродиме** и оваа тешка си́туација*

[We will surely “**ship over**” this difficult situation.]

(Aleksandra Salamurovic, 18/03/2020, political speech, Macedonian)

#### 4. How did the initiative develop and how can it keep growing?

##### 4.1 Beyond the “academic echo chamber”: Media and social impact of the initiative

In its first stages on Twitter, the #ReframeCovid conversation was fed mainly by users from academia and research institutions interested in raising critical awareness of the effects of linguistic choices in the public sphere. The “academic echo chamber” – i.e. discussion based mainly on previous scientific findings on the role of metaphor in cognition and emotion (see Section 2) – was rapidly “broken”, though. Users outside academia soon engaged in the conversation with diverse stances. While some criticised the initiative for being allegedly prescriptive (i.e. “banning” the use of war metaphors), others acknowledged it as providing a scientific basis to their own concerns about COVID-19 war rhetoric. For instance, on the critical side, Sonia Montero (Twitter @laELEctrocutada,

self-defined as “extra-academic philologist”) used the #ReframeCovid hashtag to share her *Medium* article “En defensa de las metáforas bélicas” [In defense of war metaphors], where she stressed that there is nothing like a “good” or “bad” metaphor, and that war metaphors should not be regarded as (un)advisable in any context (8th June 2020; <http://bit.ly/Monterotweet>). At the other end of the spectrum, Esther Wane, audiobook narrator and coach, included the hashtag in a tweet where she humorously reframed her lockdown as an “exclusive retreat” (27th March 2020; <http://bit.ly/Wanetweet>).

Journalists from many countries joined the conversation and extended it outside Twitter, conducting interviews with researchers involved in the initiative and writing articles where #ReframeCovid served to encourage wider reflections on the importance of language in framing complex, long-term public phenomena such as the coronavirus crisis. Just to name a few examples: in Spain, Austria and the UK, Iraide Ibarretxe-Antuñano, Inés Olza, Elena Semino and Veronika Koller – who were among the first promoters of the initiative (see Section 3) – were interviewed by major radio stations (RNE, Spain; FM4, Austria; LBC Radio, UK);<sup>18</sup> in China (CGTN – China Global Television Network), #ReframeCovid served as pivotal example in a review article on war metaphors for the COVID-19 pandemic;<sup>19</sup> and the Serbian journal “Vreme” reported extensively on the initiative in a cultural article entitled “(Zlo)upotreba jezika u doba korone” [(Mis-)Use of language in the times of corona].<sup>20</sup>

A webpage was set up to present #ReframeCovid and collect its main media impacts (<https://sites.google.com/view/reframecovid/>). Currently the portal also includes a series of cartoons especially drawn/loaned by several authors to illustrate the initiative (<http://bit.ly/ReframeCovidcartoons>). Most of them were provided by renowned Spanish authors who received a call launched by the Spanish chapter of FECO (Federation of Cartoonists Organisations),<sup>21</sup> and – interest-

18. In Spain, Iraide Ibarretxe-Antuñano and Inés Olza were interviewed at RNE–Radio Nacional de España (12th April 2020, <http://bit.ly/IbarretxeRNE>; 4th April 2020, <http://bit.ly/OlzaRNE>). Veronika Koller was interviewed by Austrian FM4 (7th April 2020, <http://bit.ly/KollerFM4>). In the UK, Elena Semino intervened on LBC Radio (8th April 2020; <http://bit.ly/SeminoLBC>).

19. “Can we compare the COVID-19 pandemic to a world war?”, by Giulia Carbonaro (CGTN, 8th May 2020, <http://bit.ly/Carbonaroarticle>), based on interviews with scholars including Veronika Koller.

20. Written by Jelena Jorgačević (9th April 2020; <http://bit.ly/Vreamearticle>). Aleksandra Salamurović (University Jena; Twitter @salamurovic) translated it into English: <http://bit.ly/VreameEnglish>.

21. The call in Spain was promoted by Kap (Jaume Capdevila), known for his cartoons at mainstream journals such as “La Vanguardia” and “Mundo Deportivo”. See the call at <http://bit.ly/FECOcall>.

ingly – they very often exemplify the most frequent non-war source domains comprised in the #ReframeCovid collection (see Section 3) such as, for example, SPORTS (Figures 4 and 5).



**Figure 4.** DE-CONFINEMENT [Spanish *desconfinamiento*] IS A RACE. JRMora (Juan Ramón Mora). <http://bit.ly/JRMora>



**Figure 5.** THE PANDEMIC IS A CHESS MATCH. Elena Ospina. <http://bit.ly/EOspina>

It is important to note that the social reach of #ReframeCovid outside academia – mainly in the form of media coverage – was definitely boosted by press releases promptly circulated by universities’ media offices. Early in April 2020, the press offices at the University of Navarra and Lancaster University released news items<sup>22</sup> where the initiative and its initial impact were explained by – or on

22. University of Navarra (2nd April 2020; <http://bit.ly/Spainpress>; Isabel Solana): “#ReframeCovid: una iniciativa para pasar del marco lingüístico bélico sobre el coronavirus hacia otro que cohesione a la población” [#ReframeCovid: An initiative to move from the language of warfare to forms of expression that bring people together]. Lancaster University (8th April 2020; <http://bit.ly/UKpress>): “Beyond the battle, far from the frontline: a call for alternative ways of talking about Covid-19”.

behalf of – Inés Olza (Navarra), Veronika Koller and Elena Semino (Lancaster). The spread of these press releases resulted in a peak of the hashtag use on Twitter and, at the same time, in a substantial increase of media citations of the initiative. The #ReframeCovid experience shows that university media offices should not be taken as mere of “amplifiers” of the researchers’ work. Quite on the contrary, they have a crucial role in mediating science; that is, in selecting topics that are relevant to society, explaining them in a comprehensible – but still accurate – way, and making them attractive to stakeholders – not only the media, but also potential funders and policy makers.

Along the same lines, other relevant “lessons” can be drawn from the interaction between the #ReframeCovid initiative, university press offices and the media. First of all, it should be acknowledged that the social reach of academic and research institutions is still limited. In the public realm, linguists are viewed as experts, not as agenda-setters. This means that doing linguistics in and for society must be supported by the media and by experts in science communication. Secondly, scientists – and linguists among them – face several challenges when interacting with the media. For instance, they are often asked to provide attractive headlines at short notice, which may conflict with scientific rigor; and they must be prepared to see their statements framed within unexpected media narratives.<sup>23</sup> Finally, linguists and Linguistics as a science are most often perceived as prescribers; that is, as agents aiming at “banning” or “allowing” certain linguistic uses. We mentioned above that #ReframeCovid was often criticised for being an allegedly prescriptive initiative. The meta-ethnography developed in this paper has nevertheless underscored its non-prescriptive nature. This initiative was born to raise critical awareness of language use in coronavirus times, as well as to foster a “healthy” variety of figurative framings that might capture the full complexity of a long-term global phenomenon such as the pandemic. We expect to have shown (see Section 2) that war metaphors were indeed useful in early stages of the emergency, especially to convey the seriousness of an unprecedented health crisis. However we also argued that keeping the WAR frame – or just one single frame, whatever it is – as dominant in our discourses on COVID-19 cannot provide a full understanding of the pandemic and can generate problematic cognitive and emotional effects.

---

23. Among other examples, in Spain #ReframeCovid was extensively cited in anti-militarist media such as the Basque journal “Naiz/Gara” (3rd April 2020, <http://bit.ly/NaizGara>).

## 4.2 How to use and credit the #ReframeCovid collection

The initiative will be alive for as long as (non-)linguists keep feeding the crowd-sourced collection and – perhaps more importantly – for as long as they use its data for their own research and dissemination purposes.

#ReframeCovid is a collective endeavour that adheres to open science policies. Both the initiative webpage (<http://bit.ly/ReframeCovidWeb>) and the metaphor collection (<http://bit.ly/ReframeCovid>) are licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (<http://bit.ly/CC4license>). The license allows users to share (copy and redistribute in any medium or format) and adapt (remix, transform, and build upon) #ReframeCovid materials with non-commercial purposes provided that the initiative is credited accordingly.

The collaborative spreadsheet is currently available for download in .xls, .ods, .csv and .tsv format. Examples drawn from these sources must include the citation reference “#ReframeCovid collection”, together with the URL <http://bit.ly/ReframeCovid> and credits to the person(s) who provided them.

Until July 2020, contributors were able to edit the Google Drive spreadsheet directly. Any user could add new examples or edit previously stored ones. This allowed the collection to grow fast in the first months of the initiative but also posed self-evident risks: the spreadsheet suffered a massive data loss around mid-July. Although data recovery was finally facilitated by Pernille Bogø Jørgensen, in order to avoid future eventualities, new contributions to the #ReframeCovid collection should now be sent via Google Forms (<https://forms.gle/416CxZrybVyA5Zk1A>).

## 5. Final remarks

To conclude, the #ReframeCovid experience has so far been immensely rewarding, as well as occasionally challenging, for the authors of this paper, and, we hope, for all contributors to the collection to date. As a wider group, we have raised awareness about the framing potential of metaphors, the scientific basis for scrutinising dominant metaphors, and the need to have available a range of metaphors for complex, destabilising and long-term phenomena such as a global pandemic. We have also made a contribution to raising the profile of linguists, and metaphor scholars more specifically, as experts to be consulted on important issues in public health communication. And those of us who have been involved more directly have also learnt more about ourselves, as people and scholars,

while navigating a new initiative and some degree of media attention during a lockdown.

Our hope for the future is that others, beside ourselves, will continue to add to and make use of the #ReframeCovid collection, for as long as it is relevant and necessary, and that this initiative will inspire future ones on communication about major global issues as they arise.

## Funding

The authors would like to acknowledge the following funding sources: Olza: FEDER/Spanish AEI (PGC2018-095703-B-I00); Pérez-Sobrino: FEDER/Spanish AEI (FFI2017-82730); Ibarretxe-Antuñano: FEDER/AEI (FFI2017-82460-P) and Government of Aragon (Psylex H11-17R); Semino: ESRC, UK Research and Innovation (ES/R008906/1).

## References

- Benziman, Y. (2020). “Winning” the “battle” and “beating” the COVID-19 “enemy”: Leaders’ use of war frames to define the pandemic. *Peace and Conflict: Journal of Peace Psychology*, 26(3), 247–256. <https://doi.org/10.1037/pac0000494>
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *Lancet*, 395, 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cutler, D. (2020). How will COVID-19 affect the health care economy? *The JAMA Forum (Journal of the American Medical Association)*, 323(22), 2237–2238. <https://doi.org/10.1001/jama.2020.7308>
- Fernández-Pedemonte, D., Casillo, F., & Jorge-Artigau, A. I. (2020). Communicating COVID-19: Metaphors we “survive” by. *Tripodos*, 47(2), 145–159.
- Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2017). Metaphors for the war (or race) against climate change. *Environmental Communication*, 11(6), 769–783. <https://doi.org/10.1080/17524032.2017.1289111>
- Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2018). War metaphors in public discourse. *Metaphor and Symbol*, 33(1), 1–18. <https://doi.org/10.1080/10926488.2018.1407992>
- Gillis, M. (2020). Ventilators, missiles, doctors, troops. The justification of legislative responses to COVID-19 through military metaphors. *Law and Humanities*, 14(2), 135–159. <https://doi.org/10.1080/17521483.2020.1801950>
- Grady, J. (1997). Foundations of meaning. Primary metaphors and primary scenes. Unpublished PhD thesis. University of California, Berkeley.
- Hauser, D. J., & Schwarz, N. (2015). The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions. *Personality and Social Psychology Bulletin*, 41(1), 66–77. <https://doi.org/10.1177/0146167214557006>

- Hendricks, R. K., Demjen, Z., Semino, E., & Boroditsky, L. (2018). Emotional implications of metaphor: consequences of metaphor framing for mindset about cancer. *Metaphor and Symbol*, 33(4), 267–279. <https://doi.org/10.1080/10926488.2018.1549835>
- Honigsbaum, M. (2013). Regulating the 1918–19 pandemic: Flu, stoicism and the Northcliffe press. *Medical History*, 57(2), 165–185. <https://doi.org/10.1017/mdh.2012.101>
- Hutchins, E. (2005). Material anchors for conceptual blends. *Journal of Pragmatics*, 37, 1555–1577. <https://doi.org/10.1016/j.pragma.2004.06.008>
- Kövecses, Z. (2003). The scope of metaphors. In A. Barcelona (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective* (pp. 79–91). Berlin & New York: Mouton de Gruyter. <https://doi.org/10.1515/9783110894677.9>
- Larson, B. M. H., Nerlich, B., & Wallis, P. (2005). Metaphors and biorisks: The war on infectious diseases and invasive species. *Science Communication*, 26(3), 243–268. <https://doi.org/10.1177/1075547004273019>
- Martínez-Brawley, E., & Gualda, E. (2020). Transnational social implications of the use of the “war metaphor” concerning coronavirus: A bird’s eye view. *Culture e Studi del Sociale*, 5(1), 259–272.
- Pragglejaz Group (2007). MIP: A method for identifying metaphorically used words in discourse. *Metaphor and Symbol*, 22(1), 1–39. <https://doi.org/10.1080/10926480709336752>
- Rajandran, K. (2020). “A long battle ahead”: Malaysian and Singaporean prime ministers employ war metaphors for COVID-19. *GEMA Online. Journal of Language Studies*, 20(3). <https://doi.org/10.17576/gema-2020-2003-15>
- Rodríguez-Rey, R., Garrido-Hernansaiz, H., & Collado, S. (2020). Psychological impact and associated factors during the initial stage of the coronavirus (COVID-19) pandemic among the general population in Spain. *Frontiers in Psychology*, 23 June. <https://doi.org/10.3389/fpsyg.2020.01540>
- Rojas, D., & Fernández, L. (2015). ¿Contra qué se lucha cuando se lucha? Implicancias clínicas de la metáfora bélica en oncología. *Revista Médica de Chile*, 143, 352–357. <https://doi.org/10.4067/S0034-98872015000300010>
- Ruiz, I. (2018). Between horror and obscene beauty: The passion of photojournalism during the War on Drugs in Mexico (2006–2012). *Journal of Latin American Cultural Studies*, 27(2), 215–229. <https://doi.org/10.1080/13569325.2018.1447446>
- Sabucedo, J. M., Alzate, M., & Hur, D. (2020). COVID-19 y la metáfora de la guerra. *Revista de Psicología Social*, 35, 618–624. <https://doi.org/10.1080/02134748.2020.1783840>
- Semino, E., Demjen, Z., Hardie, A., Rayson, P., & Payne, S. (2018). *Metaphor, cancer and the end of life: A corpus-based study*. New York: Routledge.
- Sontag, S. (1979). *Illness as metaphor*. New York: Farrar, Straus and Giroux.
- Steen, G. J., Dorst, A. G., Herrmann, B. J., Kaal, A. A., Krennmayr, T., & Pasma, T. (2010). *A method for linguistic metaphor identification: From MIP to MIPVU*. Amsterdam & Philadelphia: John Benjamins. <https://doi.org/10.1075/celcr.14>
- Wicke, P., & Bolognesi, M. M. (2020). Framing COVID-19: How we conceptualize and discuss the pandemic on Twitter. *PLoS ONE*, 15(9), e0240010. <https://doi.org/10.1371/journal.pone.0240010>
- Zappettini, F. (2019). The Brexit referendum: How trade and immigration in the discourses of the official campaigns have legitimised a toxic (inter)national logic. *Critical Discourse Studies*, 16(4), 403–419. <https://doi.org/10.1080/17405904.2019.1593206>

## Address for correspondence

Elena Semino  
Department of Linguistics and English Language  
Lancaster University  
County South  
Lancaster LA1 4YL  
United Kingdom  
e.semino@lancaster.ac.uk

## Biographical notes

**Inés Olza** is Senior Research Fellow at the Institute for Culture and Society (ICS) of the University of Navarra. At ICS, she is affiliated with the Emotional Culture and Identity Project, where she is head of the Multimodal Pragmatics Lab for the study of language, cognition and emotion.

**Veronika Koller** is Professor of Discourse Studies at Lancaster University. Her research interests are in discourse analysis and metaphor, which she applies to business communication, political discourse, and language and sexuality.

**Iraide Ibarretxe-Antuñano** is Professor of General Linguistics at the University of Zaragoza and Fellow of the Academia Europaea. Her research focuses on the relation between language, cognition and communication from a typological and psycholinguistic perspective.

**Paula Pérez-Sobrino** is a Lecturer in Modern Philologies (English) at the University of La Rioja. Her main research interests are metaphor and metonymy, multimodality, and creativity across cultures.

**Elena Semino** is Professor of Linguistics and Verbal Art in the Department of Linguistics and English Language at Lancaster University, and Director of the ESRC Centre for Corpus Approaches to Social Science. She works in the areas of stylistics, metaphor theory and analysis, health communication and corpus linguistics.