“We wake, work, *fight*, eat, drink, *fight*, and we forget to sleep”

A corpus linguistic study of WAR metaphors in the context of the Coronavirus pandemic

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Abstract in Norwegian

Denne masteroppgaven tar for seg hvordan Covid-19 pandemien har blitt metaforisk fremstilt i nyhetsartikler og magasiner i USA, Storbritannia og New Zealand. Det vil bli spesielt lagt vekt på krigsmetaforer da de ble brukt og mye omdiskutert i begynnelsen av pandemien. I tillegg vil det bli lagt vekt på hvor ofte krigsmetaforer ble brukt sammenlignet med andre metaforer.

Datagrunnlaget til oppgaven er et korpus med samlinger av nyhetsartikler og magasiner som er knyttet til pandemien eller Covid-19 viruset (the Coronavirus corpus). Korpuset blir daglig oppdatert og inneholder tekster fra 20 forskjellige engelsktalende land. Data for oppgaven ble samlet inn fra april 2020 og april 2021, for å se kontrasten i bruken av krigsmetaforer og andre metaforer fra begynnelsen av pandemien og et år inn i pandemien. Analyseringen er hovedsakelig semantisk, da hvilke temaer krigsmetaforene belyser er av interesse for oppgaven.

Funnene i oppgaven tilsier at krigsmetaforer ble brukt mer i april 2020 enn i april 2021, og at USA og Storbritannia brukte metaforene til å beskrive Covid-19 mye mer enn New Zealand i begge periodene. Temaer som metaforene belyser er situasjon, resurs, restriksjon, solidaritet, metode, kropp, innsats og andre, noe som viser at metaforene illustrerer ulike sider ved pandemien. Krigsmetaforne er brukt for å fange oppmerksomhet og for å fremheve alvorligheten av situasjonen, men disse effektene blir svekket av den generelle bruken av metaforen om andre tema. Gjennom analyseringen blir det vist at krigsmetaforer ikke bare er brukt for å beskrive pandemien, da også tema som andre sykdommer, feilinformasjon om Covid-19, vaksinering, effekten av pandemien og viruset og andre metaforiske temaer som politikk, klima, personlige problemer og rettigheter kommer frem. Den utvidede bruken av krigsmetaforene kan derfor påvirke alvorligheten den skal forespeile og dermed ha mindre effekt.

Krigsmetaforene klarer for så vidt ikke å illustrere et framtidsperspektiv eller beskrive progresjonen av pandemien, da selve krigen er i fokus. I tillegg er det andre sider som spredning og menneskers påvirkning av spredningen av viruset som kan bli bedre belyst med metaforer.

Denne oppgaven tilføyer informasjon til tidligere studier om metaforbruk rundt Covid-19 pandemien, i tillegg til at den bidrar til den generelle diskursen rundt metaforbruk.

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OED	–	Oxford English Dictionary
The NOW corpus	–	The News on the Web Corpus
WHO	–	World Health Organization
CMT	–	Conceptual Metaphor Theory
MIP	–	Metaphor Identification Procedure
MIPVU	–	Metaphor Identification Procedure Vrije Universiteit
CDA	–	Critical Discourse Analysis
AMR	–	Antimicrobial Resistance
PPE	–	Personal Protective Equipment
GB	–	Great Britain
NZ	–	New Zealand

Yes this enemy can be deadly, but it is also beatable – and we know how to beat it and we know that if as a country we follow the scientific advice that is now being given we know that we will beat it.

And however tough the months ahead

we have the resolve and the resources to win the fight.

Boris Johnson, 17 March 2020 (*gov.uk* 2020)

1 INTRODUCTION

The statement above is from Boris Johnson's speech on 17 March 2020. By using the words *enemy, beatable, beat, win,* and *fight,* the British Prime Minister, like other figures in power across the world (e.g., Islentyeva 2020, Gulzar et.al. 2021), frames the situation concerning the Coronavirus pandemic as a war. These sorts of statements have received criticism from within academia (e.g., Semino 2021, Olza et.al. 2021) and outside of academia (e.g., Tisdall 2020, Musu 2020) for being inappropriate to describe the pandemic. Some of the arguments concern the emotional implications of the metaphors, as they create more anxiety and fear than necessary, as well as only highlighting the short-term aspect of the pandemic. The usage of war metaphors even initiated a movement to reframe the pandemic by using other types of metaphors so that a wider scope of aspects of the situation can be highlighted (Olza et.al. 2021).

The reason for the massive response to the war metaphors is because metaphoric expressions help structure our understanding of different topics (Lakoff & Johnson 1980). Metaphors can, for example, be used to describe complex and abstract topics like love and argumentation in terms of more concrete topics like war or a journey. Sentences like "where is this relationship going" and "defend your argument" are therefore common in everyday language. In fact, some metaphoric expressions are so entrenched in our language that many of them pass unnoticed by people (Lakoff & Johnson 1980: 3, Kövecses 2010: xi). Based on Conceptual Metaphor Theory, metaphors can reveal how humans organise and think of the world.

This thesis is going to look at how the metaphors of war have been used to describe the pandemic by drawing on existing studies and attitudes towards the metaphors and the metaphorical framing of the Coronavirus pandemic. Section 1.1 provides information on the

Coronavirus pandemic. Section 1.2 gives an outline of the study, and section 1.3 presents the structure of the thesis.

1.1 The Coronavirus pandemic

On 31 December 2019, the Wuhan Municipal Health Commission in China reported cases of an unknown pneumonia (*World Health Organization* [WHO] 2022). On 12 January 2020, China shared information of the genetic sequence of COVID-19, and only a day later, the first case outside of China was reported in Thailand. It did not take long before the virus spread across the world, as on 11 March 2020, the WHO declared the outbreak of the Coronavirus a pandemic. During March and April 2020, many countries across the world were in lockdown and under restrictive measures to try and stop the spread of the virus, such as the UK (*Institute of government* 2022), New Zealand (*Unite Against COVID-19* 2022), and the US (*Centers for Disease Control and Prevention* 2022).

Since the first wave of positive cases in March/April 2020, there have been several lockdowns, peaks in positive cases, and Corona-related deaths (*ourworldindata* 2022a, 2022b). A year into the pandemic, however, several Covid-19 vaccines were approved and started being distributed around the world, which increased the rates of fully vaccinated people every day (*ourwroldindata* 2022c). At the time of writing, April 2022, several countries across the world have a high percentage of fully vaccinated people, causing several restrictive measures to be lifted, and allowing for a more pre-Covid every-day life.

1.2 The study

The purpose of the present study is to look for patterns in metaphors that frame the Coronavirus pandemic. The focus is going to be on metaphors that frame the pandemic in terms of war as it aims to answer the following research questions:

1. How are WAR metaphors used to frame the Coronavirus pandemic in Great Britain, the US and New Zealand in online newspaper articles and magazines?
   - Are there any differences between the countries? If so, why?
2. Are there any differences between the metaphors used at the beginning of the pandemic compared to a year later? If so, why?
3. How frequent are WAR metaphors compared to other metaphors used in the discourse of the Coronavirus pandemic?

The data is gathered from the Coronavirus corpus (Davies 2019–), which is a collection of online newspaper articles and magazines that concern the pandemic. The analysis is divided into two parts. The first part of the analysis employed a corpus-based approach, where the usage of the known war-related words *fight, combat,* and *battle* during April 2020 and April 2021 were analysed. When the words appeared with the topical context the Coronavirus pandemic, the semantic contexts they appeared in were analysed and classified. The data was furthermore analysed to see if the metaphors adhered to any grammatical patterns. The results from the first part of the analysis answer research questions 1 and 2. The second part of the analysis employed a more corpus-driven approach (but not fully so) as the phrase of interest, *the spread of,* was discovered in the data of *fight, combat,* and *battle*. Analysing *the spread of* allowed for the preceding context to be analysed for metaphors, and what types of metaphors that appeared in the context of the pandemic. The results of the second part of the analysis answer research question 3.

The overall results reveal that WAR metaphors are used in the context of body, resource, restriction, situation, unity, method, effort, and other. The WAR metaphors are furthermore used more frequently in April 2020 compared to April 2021. The general framing of *the spread of* reflects a usage of a diverse range of metaphors, where the WAR metaphors were not the most frequent ones.

1.3 Thesis structure

The thesis starts with the theoretical framework in chapter 2, where the concept of metaphors is presented (sections 2.1 and 2.2). In section 2.3, metaphor in a broader cognitive linguistic aspect is discussed. Section 2.4 intertwines the topic of metaphor with the Coronavirus pandemic, which is followed by a discussion of some research gaps in section 2.5, and the relevance of Discourse analysis in 2.6. Chapter 3 presents the methodology and data where section 3.1 concerns the source and data collection. Section 3.2 discusses the application of a corpus linguistic approach to metaphors, while section 3.3 presents the methodological framework for analysing metaphors. The quantitative analysis is presented in 3.4, followed by the qualitative analysis in 3.4. The classifications of the patterns for the semantic concepts, topical concepts, and the conceptual metaphors are presented in section 3.6. Chapter 4 presents the results from the analysis, as well as a discussion and contextualisation of the findings. Section 4.1 presents the quantitative results of the inflections of *fight* and the lemmas *combat* and *battle*. Section 4.2 concerns the qualitative analysis of the inflections of

fight and the lemmas *combat* and *battle,* where the semantic contexts are discussed in subsections. The second part of the analysis (*the spread of*) is presented in section 4.3, where both the qualitative and quantitative results are discussed. Section 4.4 includes a general discussion of all the results and implications of the findings. Finally, chapter 5 offers a conclusion and summary, as well as limitations to the thesis and suggestions for future studies.

2 THEORY

In this chapter, the theoretical framework the thesis is presented. First, the concept of metaphors is discussed in section 2.1, followed by the cognitive linguistic view of Conceptual Metaphor Theory (CMT) in 2.2. Transference of meaning, framing, and entailments are discussed in 2.2.2, and the degree of metaphoricity for different expressions and conceptual metaphors are discussed in 2.2.3. Metaphors and CMT are then considered in a larger perspective where work from cognitive linguistics is presented in 2.3 and 2.3.1. The Coronavirus pandemic and metaphors are discussed in section 2.4, followed by research gaps in 2.5. In section 2.6, Discourse analysis, which is the field that correlates language, thought, and ideology is presented. Finally, metaphors in other areas than Conceptual Metaphor Theory are discussed in section 2.7.

2.1 Linguistic and Conceptual metaphors

Metaphoric expressions such as (1)–(3)[1] take one abstract concept and describe it in terms of a more concrete concept (Lakoff & Johnson 1980, Deignan 2005: 14, Kövecses 2010: 7). In (1)–(2) the abstract concept of time is expressed through the concrete concept of money. In (3) the abstract concept of love is expressed through the concrete concept of journey.

(1) Could you *spare* me a moment?
(2) I would like to *spend* my time differently.
(3) *Where* is this relationship *going*?

The metaphorical meanings of these expressions are realised through the words *spare*, *spend, where*, and *going*. These words are metaphorical because they have a lexical meaning that is typically more concrete and bounded in certain contexts and a metaphorical meaning in more abstract contexts. The word's literal meaning is called the vehicle, and the metaphorical meaning is called the topic (Deignan 2005: 14). Together they form what is typically referred to as linguistic metaphors (Deignan 2005: 14, Kövecses 2010: 4). For example, in (3) the vehicle of *going* is to move or travel to a particular place (*Macmillan* 2022, accessed 5 November 2021), while the topic is how the romantic relationship is developing.

[1] The numeration for the examples presented in the thesis starts from (1) in each chapter.

There has been found a systematicity to these linguistic metaphors, causing them to be semantically categorizable into conceptual metaphors (Lakoff & Johnson 1980: 7–9, Kövecses 2010: 4, Deignan 2005: 15). Expressions (1)–(3) can then be categorised into specific semantic domains. The concrete concept is considered the Source Domain, which is used to describe the more abstract concept, the Target Domain (Kövecses 2010: 4). Conceptual metaphors are more generally referred to as *understanding* one concept in terms of anther and are realised as CONCEPTUAL DOMAIN A IS CONCEPTUAL DOMAIN B (conceptual metaphors, Source Domains, and Target Domains are written in small caps to distinguish them from linguistic metaphors). The conceptual metaphors of expressions (1)–(2) and (3) are then TIME IS MONEY and LOVE IS A JOURNEY, respectively. It is therefore important to distinguish linguistic metaphors that can be found in language (which is referred to as metaphors in this thesis) and conceptual metaphors that can be seen through the systematicity and existence of linguistic metaphors (Lakoff & Johnson, 1980: 7, Kövecses 2010: 4). Conceptual metaphors have been argued to structure our conceptualisation and understanding of the world (Lakoff & Johnson 1980: 3).

2.2 Conceptual Metaphor Theory

Lakoff and Johnson (1980) developed the notion of conceptual metaphors through their Conceptual Metaphor Theory (CMT). The theory states that conceptual metaphors are systems of how we think of and understand the world. Metaphors are therefore considered to be grounded in our conceptual system, which in turn implies that what types of metaphors we are exposed to can shape and structure our conceptual system (Lakoff & Johnson 1980: 3).

The reason why we speak and think metaphorically is based on the basic principles of cognitive models and categorisation (Lakoff & Johnson 1980: xi). Some of the most essential principles and models to CMT are concepts, categorisation, and frames. Lakoff (1987a: 5–6) writes that categorisation is the most basic function of our thoughts, perceptions, actions, and speech, and that every time we interpret language, hundreds of different categories are employed. It has even been argued that categorisation is essential for survival (Kövecses 2006: 17), and that it is one of the basic functions of living creatures (Rosch 1999: 61). We categorise things into different concepts based on how well they fit the prototypical attributes of the concept (Rosch 1999: 66). These concepts are again conceptually structured, which evokes particular frames (Fillmore 2006: 613) that can broadly be considered as a mental representation of a conceptual category (Kövecses 2006: 64). There are single words that

evoke the different frames (Fillmore 2006: 614). For example, the word *school* brings forward the notions of *teachers, students, homework, test,* and so on. These frames can then be used to draw correlations and similarities with other frames, which is how metaphors are created (Kövecses 2006: 115). Furthermore, different aspects of a single frame can be used to define the whole frame, which is how metonymy is created (Kövecses 2006: 97). All these cognitive structures and frames interact with each other for humans to make sense of the world.

The categories and conceptualisations that form in our mind are based on several sources. The sources can be our experience as human beings (Lakoff & Johnson 1980: 56), or it can be based on cultural and historical memory (Kövecses 2010: 215, Charteris-Black 2014: 160). What types of conceptual metaphors are created depends on what source the categorisation and conceptualisation are drawn from.

2.2.1 Types of conceptual metaphors

There are different cognitive functions that conceptual metaphors perform, which makes it possible to categorise them into three types, structural metaphors, ontological metaphors, and orientational metaphors (Lakoff & Johnson 1980). Structural metaphors have been argued by Kövecses (2010: 37) to structure our conceptual system more so than the others. This is because the fundamental part of structural metaphors is using a rich knowledge structure of the Source Domain to describe the Target Domain. Structural metaphors include conceptual metaphors such as LOVE IS A JOURNEY and ARGUMENTATION IS WAR (Lakoff & Johnson 1980: 61, 85, Kövecses 2010: 37–8). The key element to these types of metaphors is cognitive structuring, which structural metaphors are thought of as having more of than the other two (Kövecses 2010: 37–40). This is because the Target Domains in ontological metaphors are typically more abstract and vague concepts or experiences, which is why they are described in terms of entities such as physical objects, substances, and containers that are not clearly delineated or specified. THE MIND IS A MACHINE is a typical ontological metaphor (Kövecses 2010: 38–9). Orientational metaphors are grounded in even less cognitive structuring because they draw on the human spatial orientational experiences. Kövecses (2010: 40) argues that it might be better to name them ‘coherence metaphors’, since that describes more the cognitive function they provide. Their main function is organising concepts in a uniform manner, e.g., UP/DOWN, FORWARD/BACKWARD. Conceptual metaphors such as MORE IS UP and LESS IS DOWN are typical for this category (Kövecses 2010: 40).

Lakoff and Johnson (1980: 4) further argue that there is a set of metaphors that structures our worldview more so than others, namely conventional metaphors. Conventionality is thought of as "the degree to which either a linguistic or a conceptual metaphor has become entrenched in the course of its use" (Kövecses 2006: 127). Conventional metaphors can be so entrenched in our language that they are difficult to detect, which argues that conventional conceptual metaphors are a fundamental way in how we think about abstract concepts (Kövecses 2010: 34).

2.2.2 Transference of meaning, framing, and entailment

Lakoff and Johnson (1980: 9) found that there is a systematic correspondence between the transference of meaning across the Source and Target Domains. This correspondence is referred to as mappings (e.g., Kövecses 2010, 2015, Charteris-Black 2018: 204), which concerns that some aspects of the Source Domain are transferred onto some aspects of the Target Domain. It is important to point out that, since the metaphorical mapping only covers *some* aspects of the domain, i.e., *some* aspects of a topic or phenomenon, there are aspects that are highlighted while others are downplayed (Lakoff & Johnson 1980: 10, Kövecses 2010: 92). Presenting topics in certain metaphorical ways can then affect how the topics are framed. TIME IS MONEY for example, evokes the entailments[2] of time being valuable, somethings that can be wasted, or lost. Unlike money, however, time cannot be given back or be produced more of, which is therefore a property of money that is not transferred onto time. This reasoning is in line with the Invariance Principle that states that certain aspects are not transferred from the Source Domain and onto the Target Domain because the mapping is dependent on the schematic structure of the Target Domain (Kövecses 2010: 131).

Since only some aspects are mapped onto the Target Domain, it is typical that one Target Domain is described by several Source Domains. For example, the concept of LOVE can be framed as a JOURNEY, but also as MADNESS, A PATIENT, and WAR (Lakoff & Johnson 1980: 85). By using a variety of Source Domains, different aspects of a topic are highlighted, and arguably, a more wholesome understanding of the topic is formed (Olza et.al. 2021: 116). Other than the images that the metaphorical frames provide, there are other entailments that are connected to metaphors.

It is important to point out that metaphorical images and frames that are evoked by metaphorical expressions do not only provide more concrete understandings of abstract

[2] Entailments have also been referred to as additional knowledge by Kövecses (2010: 127).

topics. Flusberg, Matlock, and Thibodeau (2018: 3) argue that metaphors also provide emotional tones. Furthermore, Charteris-Black (2014: 160) states that "metaphor… entails thought, or ideas, as well as language, and enable us to explore limitless different ways of thinking." According to this point of view, metaphors affect thought and conceptualisation. How much the metaphors affect thought, however, is determined by metaphoricity.

2.2.3 Metaphoricity

As mentioned in section 2.2.1, some metaphors are grounded in our experience as humans, like orientational metaphors (HAPPINESS IS UP), while others are culturally and historically grounded, such as structural metaphors (LOVE IS A JOURNEY). One of the more important and interesting factors for this thesis is culture. Kövecses (2010: 215, 2015: 50) states that there are intercultural as well as intracultural variations when it comes to the usage and creation of metaphors, which causes metaphor creation and interpretation to vary both between and within cultures. Since culture is always in constant change, and metaphors are intrinsically connected to it, metaphors change as well. For example, metaphorical meanings may be lost to speakers as the original literal meaning comes out of use, or because the connection to the literal meaning is lost (Deignan 2005: 25). The different stages that metaphors go through determine the perceived metaphoricity of them, i.e., how conventional and grounded they are in our conceptual system. Following Deignan's (2005: 39) work on metaphoriciy where she bases her models on the works of Lakoff's 'dead' metaphors and Goatly's classification of linguistic metaphors, in addition to corpus-based findings, metaphors can be classified into four groups. The groups are as follows, innovative/new metaphors,[3] conventional metaphors, historical metaphors, and dead metaphors.

When the original lexical meaning of metaphors bleach over time, i.e., lose their original meaning so only the metaphorical meaning is left, they are typically referred to as historical metaphors (Deignan 2005: 40). With historical metaphors, the entailments of the original meaning of the lexical word in the Source Domain is then not transferred onto the Target Domain. A solid example of a historic metaphor is the word *pedigree*. The original meaning was "a crane's foot" which was mapped over to mean "a family tree" (Lakoff 1987b: 144). The mental image and the meaning of "a crane's foot" is long gone for contemporary English speakers, so unless one knows the etymology of the word, people will not typically

[3] Non-conventional metaphors are called both "new metaphors" (Lakoff & Johnson 1980, Kövecses 2010), and "innovative metaphors" (Deignan 2005).

evoke the image of a crane's foot. Lakoff therefore argues that pedigree should be considered a historical metaphor (Lakoff 1987b: 147). Innovative metaphors can be detected based on their rare occurrences in the corpus (Deignan 2005: 40). They are not entrenched in a language to the same degree as conventional metaphors are – though over time, they may become entrenched and turn into conventional metaphors (Lakoff & Johnson 1980: 235, Deignan 2005: 3).

'Dead' metaphors and conventional metaphors, on the other hand, are more difficult to distinguish (Deignan 2005: 41). Simply put, while conventional metaphors are more dependent and rely on the literal sense of the word, 'dead' metaphors are not. Kövecses (2010: xi) goes even further and states that a 'dead' metaphor cannot be considered a metaphor at all. Establishing exactly what type of metaphor an expression is with a specific case, might be challenging since individuals might interpret metaphors differently, e.g., some might focus/think of the original lexical meaning of the metaphor more so than others. For example, the word *dunk* has been argued to be a 'dead' metaphor (Lakoff 1987b: 144–5). At some point, the 'specialised' image of "dipping pasty in a cup of liquid", was transferred onto the sense of "dunking a basketball". Since both the meanings are still used, but the connection between the two meanings is not evoked anymore, the metaphor is considered as 'dead'. 'Dead' metaphors are also considered as idiosyncratic, unsystematic, and isolated and do not interact with other metaphorical expressions (Lakoff & Johnson 1980: 55). The topic of 'dead' metaphors is complex, which is why other terms such as "sleeping metaphors" and "tired metaphors" have been suggested to distinguish between metaphors where the literal meaning is evoked more so than others (Deignan 2005: 41). This thesis will therefore distinguish between 'dead' metaphors where the literal meaning is very unlikely to be evoked by contemporary speakers, and conventional metaphors where there is a higher possibility of contemporary speakers evoking the literal meaning (like LOVE IS A JOURNEY and TIME IS MONEY).

2.3 Cognitive linguistics

As this thesis concerns CMT, it falls under the category of Cognitive linguistics. Cognitive linguistics is a sub-field that intertwines the study of language and thought. The focus of the field is, like cognitive science, to find out how the human mind works. The only difference is that cognitive linguistics tries to find answers specifically through how language is organised, structured, and how we convey information (Geeraerts & Cuyckens 2012: 1). There are

several approaches to study cognitive linguistics such as grammatical, metaphorical, and lexical, however, the fundamental grounding of these studies is the belief that language reflects patterns of thought (Evans & Green 2006: 5). Because of the diverse methods and research topics in the field, cognitive linguistics should be seen as a flexible framework rather than a theory (Geeraerts & Cuyckens 2012: 2).

2.3.1 Metaphorical influence on thought, reasoning, and action

As of now, there is no consensus on how much metaphors affect thought, reasoning, and action. Several psycholinguistic studies have been conducted, where some find no correlation between metaphors and people's perception of different topics (e.g., Steen, Reijnierse, & Burgers 2014, Panzeri, Di Paola, & Domaneschi 2021, Charteris-Black 2021, Schnepf & Christmann 2022), while other studies have found an effect of metaphorical framings (e.g., Thibodeau & Boroditsky 2011, Thibodeau & Durgin 2011, Semino, Demjén, & Demmen 2016, Thibodeau, Hendricks, & Boroditsky 2017, Elmore & Luna-Lucero 2017, Semino et.al. 2017, Hauser & Schwarz 2015, 2020). Despite there not being any consensus about the impact of metaphors, there are some methodological differences and external factors in the studies that might cause a metaphorical effect with certain topics and with certain people.

For example, Thibodeau and Boroditsky (2011) found that when crime in a fictional town was metaphorically framed as a beast, participants were significantly more likely to suggest punishment, harsher law enforcements, building more prisons, and catching and jailing the criminals rather than suggesting other options to handle the issue. When crime was framed as a virus, on the other hand, the participants were significantly more likely to suggest measurements such as social reforms, finding the source of the crime problem, and improving education. Thibodeau and Boroditsky (2011: 9) also found that when the metaphors were presented earlier in the text, the metaphoric effect was greater.

A study by Elmore and Luna-Lucero (2017) found that when ideas were framed as light bulbs, the quality of the idea was considered better, compared to when it was framed as a seed or framed non-metaphorically. When asked to judge the inventor, it mattered whether he/she was a man or a woman. If the creator was a man and the idea was framed as a light bulb, not as a seed, the creator was considered more of a genius. The same applied for the woman inventor when the idea was framed as a seed, but not as a light bulb. The control group that was exposed to the non-metaphorical representations of the idea, did not have any significant effects, and fell in between the light bulb and seed results. Even though the

differences between the metaphor conditions and the non-metaphor condition were not significant, the study reflects the type of metaphorical framing chosen for a topic might alter the perceptions of that certain topic.

Thibodeau and Boroditsky's (2011) and Elmore and Luna-Lucero's (2017) studies presented the participants with topics they did not have any prior set of beliefs or knowledge about. Prior beliefs and knowledge about the topics and the metaphorical frame have been found to affect both metaphor acceptance and comprehension (Thibodeau & Durgin 2011: 220, Thibodeau, Hendricks, & Boroditsky 2017: 854). Furthermore, it has been argued that people are more likely to reject metaphors if they contradict their already formed attitudes about the topic (Landau & Keefer 2014: 417). This has been reflected through Landau, Keefer, and Rothschild's (2014: 134) study where participants that had prior attitudes and beliefs about the financial crisis in 2008 caused the metaphors applied in the study to have no effect as the metaphors conflicted with the participant's prior beliefs. Furthermore, in Landau, Arndt, and Cameron's (2018) study a correlation between enemy fear and the effect of WAR metaphors was found. Those who scored high on enemy fear and exposed to WAR metaphors, were more willing to partake in preventative actions, as compared to those who scored low on enemy fear and exposed to WAR metaphors (ibid.: 144). There were no effects when the enemy fear was low. Landau, Arndt, and Cameron (2018: 136) call this effect for the Source resonance hypothesis, which states that the metaphorical message will differ depending on the recipient's pre-existing knowledge of the Source Domain. Some evidence for the Source resonance hypothesis is the effect political stance has on metaphorical influence (e.g., Thibodeau & Boroditsky 2011, Panzeri, Di Paola, & Domaneschi 2021). Closely connected with prior knowledge is the degree of certainty of a topic.

The degree of certainty on the concept of the Target Domain has also been shown to affect the influence of metaphors (Landau, Keefer, & Rothchild 2014), which might be a possible explanation for the different findings amongst the studies. Landau, Keefer, and Rothchild (2014: 131) found that when people were made uncertain about bankruptcy in general, they relied more on the metaphorical frame to understand the topic of a made-up company going bankrupt. The uncertain participants attributed more blame to the CEO when they read a text where a VEHICLE metaphor was used to frame the company as a vehicle crashing. There were no metaphor effects for the participants that were not made uncertain. The authors write that their findings are in line with CMT which argues that metaphors help structure our understanding of unknown topics (Landau, Keefer, & Rothchild 2014: 131).

Along with the prior knowledge and the degree of certainty of the metaphorical topic, the aptness of the metaphor plays a part in the effect the metaphors have (Thibodeau & Durgin 2011: 206). The aptness of the metaphor is determined by how well the metaphor vehicle of the metaphor captures and represents important features of the topic (Thibodeau & Durgin 2011: 215), i.e., structural similarities between the Source and Target Domain. This conclusion was drawn by Thibodeau and Durgin (2011: 214) through their findings, where participants read metaphors that had a higher degree of similarity in their mappings significantly faster than alternative metaphors whose mappings were not corresponding.

Despite the many studies arguing for a correlation between metaphor and thought, and the varying degrees of metaphor effect, there are studies that do not show any metaphor impact on thought and action (e.g., Steen, Reijnierse, & Burgers 2014, Charteris-Black 2021, Panzeri, Di Paola, & Domaneschi 2021). For example, a follow-up study on Thibodeau and Boroditsky (2011) found no metaphor effect (Steen, Reijnierse, & Burgers 2014). They, unlike the original study, used only one-word metaphors in the texts presented to the participants, i.e., metaphors that do not have supporting metaphors, or additional metaphorical expressions. The authors argue that the additional metaphors used by Thibodeau and Boroditsky (2011) could possibly extend the frame created, therefore, by only using a one-word metaphor, the framing effect would disappear. Their results are in concordance with their hypothesis.

To what extent, when, and how metaphors affect cognition are therefore not yet established. One reason for the diverging results might be that most psycholinguistic studies on metaphor use metaphoric expressions that do not necessarily appear in naturally occurring speech (Deignan 2005: 110). Alice Deignan (2005: 110) argues that the texts and expressions used have been created intuitively by the researchers, which might skew the results. However, as Gibbs (2014: 17) writes, “metaphoric language has the *potential* to alter how we think and feel about various topics” [italics added], which has been reflected through the studies mentioned in this section. Metaphors therefore provide an interesting field of study.

2.4 The Coronavirus pandemic and metaphors

Since the beginning of the pandemic, several studies on metaphorical framing of the pandemic have been conducted. Most of the findings reflect a high prevalence of WAR related framings (e.g., Wicke & Bolognesi 2020, Islentyeva 2020, Gulzar et.al. 2021). Wicke and Bolognesi (2020) found that within 203,756 tweets gathered during March 2020, 4.96–5.25%

mentioned at least one war-related word. In comparison, only 1.48–1.49% of tweets mentioned at least one word relating to the metaphorical frame STORM, which was the second most common metaphorical frame after WAR. Gulzar et.al. (2021) compared the metaphors in speeches held in the UK and US by the Prime Mister, the Queen and the President between March and April 2020. They found that President Donald Trump had a much higher prevalence of WAR metaphors in his speeches than Boris Johnson and the Queen had in England. Similar results were reached by Islentyeva (2020) who included speeches of Angela Merkel and Vladimir Putin in her metaphor analysis. She found that both Angela Merkel and Vladimir Putin used the WAR frame drastically less than in the UK and the US, which argues that culture is a strong influence on metaphors. However, WAR metaphors are not the only ones that have been used to describe the pandemic.

Source Domains such as CURVE (Amidon et.al 2021), BUBBLE (Kearns 2021), TSUNAMI, STORM, (Wicke & Bolognesi 2020), WAVE (Craig 2020: 1029), and FIRE, (Charteris-Black 2021, Semino 2021) have also been used to capture the different stages and aspects of COVID-19. Furthermore, creative and alternative metaphors have gained more awareness through the #ReframeCovid initiative (Olza et.al 2021). Source Domains such as PAINTING and NAVIGATION have, for example, been used to describe the overall situation of the pandemic. The initiative's aim was to raise awareness of the language used to describe the pandemic and to encourage a good and diverse representation of the long-term pandemic through a diverse range of metaphors (Olza et.al. 2021: 117).

Despite there being evidence of a range of different metaphors used, including the efforts from the #ReframeCovid initiative, WAR metaphors have appeared to be dominating the media and speeches – at least in the initial stages of the pandemic (e.g., Islenyeva 2020, Wicke & Bolognesi 2020, Gulzar et.al. 2021, Nerlich & Jaspal 2021). Two important questions that arise are, to what extent do the WAR metaphors affect perception of the pandemic, and in what contexts of the pandemic do they appear in?

2.4.1 Why WAR metaphors?

The WAR metaphors applied in framing the COVID-19 virus and the pandemic have been used to cover a wide range of aspects concerning the experience of the world-wide phenomenon. For example, the virus itself has been framed as an (*invisible*) *enemy* (e.g., Charteris-Black 2021: 31–6, Gulzar et.al 2021), healthcare workers have been framed as *soldiers* or an *army* (e.g., Gulzar et.al. 2021, Semino 2021), in business news the events

relating to the pandemic have been framed as an armed conflict (Kozlova 2021: 3), and the restrictions to slow the spread have been justified using WAR metaphors (e.g., Gillis 2020, Nerlich & Jaspal 2021). Semino (2021: 51) points out that the WAR metaphors have been used because of the structural correspondence between a war and the pandemic, like the ones mentioned above. It has also been argued that there are situations and actions taken in the pandemic that are similar to that of war, such as the need for more healthcare personnel, centralisation of legal and political powers, as well as the social and economic effects are like that of war (Olza et.al. 2021: 102). The WAR frame is therefore considered as apt (cf. 2.3.1), which is one reason why it has been used in the context of the pandemic. Furthermore, it is easy to imagine what a prototypical war might be (Flusberg, Matlock, & Thibodeau 2018: 4), which appeals to the notion of familiarity. It is then easy to accept the framing of the pandemic as a war. However, the WAR metaphors carry entailments that do not describe the Coronavirus pandemic well. Some entailments can even be damaging.

Though, it is important to mention that there is a long history of WAR metaphors being used to frame diseases. The WAR metaphors of diseases can, in fact, be traced back to 1722 where Defoe framed the Great Plague of London in 1666 in terms of war (Charteris-Black 2021: 34). Since then, diseases such as the flu (Taylor & Kidgell 2021), Antimicrobial resistance (AMR) (Walker 2020), AIDS (Craig 2020), HIV (Nie et.al. 2016), and cancer (e.g., Semino, Demjén, & Demmen 2016, Semino et.al. 2017) have been framed as war. The WAR metaphor is therefore deeply entrenched in English and is a conventional method for describing diseases and illnesses in today's society.

2.4.2 WAR framing and their entailments

WAR metaphors have been argued to raise urgency and awareness to the topic they frame (Flusberg, Matlock, & Thibodeau 2018: 4). The metaphors can therefore be used to justify and encourage people to comply to more extreme actions (e.g., Flusberg, Matlock, & Thibodeau 2018: 7, Chapman & Miller 2020: 1180, Castro-Seixas 2021: 2). It has also been argued that people are, in fact, more willing to comply to extreme actions as the WAR metaphors raise anxiety and fear (Cipolletta & Ortu 2021: 283). Furthermore, WAR metaphors can appeal to and create unity and solidarity (Gillis 2020: 154, Castro-Seixas 2021: 6). Both urgency and unity can be argued to be positive effects of the WAR framing of the pandemic. However, the exact same emotions and entailments the positive notions have can also cause negative implications.

In previous studies on WAR metaphors, it has been argued that the metaphors have a unifying effect (e.g., Gillis 2020: 154, Castro-Seixas 2021: 4, Nerlich & Jaspal 2021: 579). The unifying effect, however, can cause inequality and possible negative outcomes, especially for minorities. Chapman and Miller (2020: 1117) argue through their study on the metaphoric language used on the several 'wars' on poverty, drugs, and crime in the US that because there is a clear "us" vs "them" mentality, complex social problems are simplified. Walker (2020: 268) further argues that WAR metaphors can cause differences such as ethnicity, social class, and gender to be ignored for the common sacrifice in war. This unifying effect can then cause a sense of a need to sacrifice for the common good, or people will otherwise be perceived as selfish (Gillis 2020: 156).

In the context of cancer, there have been several studies reflecting a negative effect of WAR metaphors. Findings in corpus linguistics reflect that cancer patients can experience more guilt when treatments fail if they were exposed to or used metaphors framing their disease as a WAR (Semino, Demjén, and Demmen 2016: 638, Semino et.al 2017: 63, Hendricks et.al. 2018: 271). The feeling of guilt is grounded in that the patient 'loses' the fight to cancer (Semino et.al. 2017: 63). This consequence has further been found in a study by Hendricks et.al. (2018: 275) where participants who were exposed to WAR metaphors, as opposed to JOURNEY metaphors, increased their perception that cancer patients will feel more guilt if treatments fail.

Because of the negative effects WAR metaphors can have on the perception of cancer, it has been recommended that one should be weary of the metaphors used in relation to cancer, and especially to consider the empowering and disempowering effects metaphors have (Semino et.al. 2017: 64). Reisfield and Wilson (2004: 4025) go even further and argue against the use of WAR metaphors. The authors argue that the WAR metaphor is violent, masculine, and power-based, and that the metaphor portrays an enemy, which in the case of cancer, is not really there as the 'enemy' is the body. The framing can reduce the patients' needs for medical measures only and ignore the social and psychological aspects of the disease. Furthermore, the authors argue that the WAR metaphor entails that the only scenario of 'winning' is achieved through fighting hard enough. The latter can be especially damaging for the patient as people do not have any control of whether the treatment is successful or not.

WAR metaphors have also shown to have either the opposite desired effects of motivating people to partake in cancer preventative actions, or no effects at all (Landau, Arndt, & Cameron 2018, Hauser & Schwarz 2015, 2020). Hauser and Schwarz (2015: 70) for

example, found that participants were less willing to limit their cancer-risky behaviours when preventative actions were framed as an enemy. Furthermore, the participants selected less self-limiting behaviours as possible actions for preventing cancer with the WAR framing than with the neutral framing (ibid.: 69). In their follow up study, Hauser and Schwarz (2020: 1702) also found that the WAR framing caused an increase in the belief that cancer is out of one's control, and that cancer is more fatale. The cancer treatment was furthermore conceived as more difficult. When concerning delay in seeking help for suspicions of cancer, like the JOURNEY framing, the WAR metaphor did not have an effect. The authors therefore argue that the point of using WAR metaphors is lost.

Despite the possible negative consequences of the usage of the WAR metaphors, Flusberg, Matlock, and Thibodeau (2018: 11) provide a guideline as in how to use the metaphors in the best possible way. The authors suggest only to use the metaphor for the 'initial call to arms' as the urgent, attention-drawing effect the metaphors have is most effective for a short period. The short-term usage of the metaphors has been supported by Walker (2020), who argues that a prolonged use of WAR metaphors can have the opposite desired effect of initiating action. In the case of AMR, the research only became more diverse once the WAR metaphors started decreasing (Walker 2020: 265). Walker argues that the metaphors can cause diverse interests and possible solutions to be ignored as people, communities, and situations are placed onto a single frontline (Walker 2020: 265). Flusberg, Matlock, and Thibodeau (2018: 11) also write that hyperbolic usage of the metaphors should be avoided, and that the metaphor should be schematically apt to fit the situation or topic that it is framing. Furthermore, the authors write that there should be clear winners and losers in the scenario (2018: 4). These guidelines raise some questions of how and for how long the WAR metaphors have been used in the context of the Coronavirus Pandemic? Furthermore, what contexts have the WAR metaphors been applied to?

2.4.3 WAR framing and the Coronavirus Pandemic

The WAR metaphors have been used to cover a range of topics concerning the Coronavirus pandemic, many of which have received a lot of criticism. There has, for example, been criticism of framing healthcare workers as soldiers in the context of the pandemic, namely because of the implied self-sacrifice (Gulzar et.al. 2020, Castro-Seixas 2021: 4). Gulzar et.al. (2020: 1407) argue, after analysing speeches from the UK and the US, that using the word *solider* raises the entailments of self-sacrifice for the greater good, and the expectation of

healthcare workers to help patients with disregard to their own health and life. The WAR framing furthermore raises an expectance of people in general to participate and follow the restrictions, despite the personal costs and sacrifices that might cause (e.g., Walker 2020: 266, Chapman & Miller 2021: 1117).

As mentioned in section 2.4.2, WAR metaphors have been recommended only to be used at the initial stage of a situation. This also applies to the Coronavirus pandemic as WAR metaphors fail to highlight long-term aspects. Unlike a war where there is a clear end, i.e., the enemy is defeated or not, a pandemic can have several other outcomes such as living with the virus/enemy or weakening the virus, so that it does not cause harm. In other words, the metaphor could be argued as unapt in that respect as it does not share schematic similarities concerning the outcome of the situations.

Describing the pandemic in terms of WAR might also rouse fear and anxiety in people, which can encourage people to act (Flusberg, Matlock, & Thibodeau 2018: 4). It has also been argued by Cipolletta and Ortu (2021: 283) that this fear cause people to accept the measures and restrictions more easily, which is a statement that has been supported by other authors (e.g., Gillis 2020: 136, Castro-Seixas 2021: 4). This framing effect of the metaphor can be argued to have a positive outcome, as causing people to comply to the restrictions has the potential to save lives. However, it has also been argued that the fear and anxiety the metaphors create can have the opposite effect and rather encourage selfish and irrational behaviour, such as hoarding food and health supplies (Sabucedo, Alzate, & Hur 2020: 619). As mentioned in section 2.4.2 as well, studies on the WAR framing of preventative actions for cancer did not reflect an increase in willingness to follow them.

There have also been framings of the pandemic in terms of personal battles and struggles against the virus. This framing of the virus entails that the virus is harder for the weak (Craig 2020: 1029), and that dying is the ultimate defeat (Cipolletta & Ortu 2021: 283). This is in line with previous research on cancer (cf. 2.4.2), where victory is thought of as achievable if one only fights hard enough. There are then entailments that are ultimately negative and can cause wrong perceptions about the people who ‘survive’ and those who are ‘defeated’ by the virus.

2.4.4 The influence of WAR metaphors on the Coronavirus pandemic

There have also been several studies concerning the effect the WAR metaphors might have on perceptions and mindsets about the pandemic (Panzeri, Di Paola, & Domaneschi 2021,

Charteris-Black 2021, Burnette et.al. 2022, Schnepf & Christmann 2022). Burnette et.al. (2022: 90) found that growth mindset, concerning whether change is possible, and self-efficacy, concerning possible influence over the virus, increased when change-focused metaphors appeared in the articles that the participants read. The effect was not found with participants that read articles where WAR metaphors were applied. The findings in the first study were, however, not replicated during their second study when data was gathered at a later point during the pandemic.[4] As mentioned in section 2.3.1, previous knowledge and attitudes towards the Target Domain and certainty concerning the topic, might interfere with the acceptance of the metaphor and its influential effect. The differences in time might therefore have caused the metaphors to have less impact on the perception of the topic in the study. Similar findings were done by Charteris-Black (2021: 49) who found a lack of metaphor effect in his study on WAR metaphors and the pandemic. He draws the conclusion that people had already formed their perceptions about the pandemic and that the presence of metaphors were unlikely to change them. People had furthermore been exposed to WAR metaphors in the media for a while, which might explain the lack of metaphor effect at a later point during the pandemic.

However, a study by Panzeri, Di Paola, and Domaneschi (2021) hypothesised that if WAR metaphors affect people's reasoning, they should cause people to favour military-like measures. On the one hand, their results reveal no differences between the WAR metaphors and the control group (non-metaphors) (Panzeri, Di Paola, & Domaneschi 2021: 13). On the other hand, they did find a significant interaction between political affiliation, frequency of using independent information channels, and the selection of war-related options after having been exposed to WAR metaphors (ibid.: 12). Their findings are in line with previous research (cf. 2.3.1).

One of the more recent studies on the influence WAR metaphors might have on the perception of the Coronavirus pandemic, showed that the framing did not lead to a higher degree of support towards restrictive measures (Schnepf & Christmann 2022: 112). Still, there were some metaphoric effects concerning the perceptions about the speed the virus spread, where the frame STRUGGLE caused participants to believe it spread faster than with the WAR frame. Schnepf and Christmann (2022: 122) also found that responsibility was shifted more

[4] Data for the first study was gathered between March 30 and April 1, 2020, while the data for the second study was gathered on November 22, 2020 (Burnette et.al. 2022: 89, 91).

towards the government with the usage of WAR metaphors, while STRUGGLE metaphors increased the perception about individual responsibility.

Despite there not being any significant findings of influence of the WAR metaphors on reasoning and conceptualisation, the studies did find differences in perceptions about the virus and the pandemic when the WAR frame was used compared to non-metaphoric frames.

2.5 Research gaps

As discussed in section 2.4.3, previous research on the metaphorical framing of the Coronavirus pandemic in news articles, speeches, and on social media reflects that there are differences in usage and prevalence of metaphors (e.g., Wicke & Bolognesi 2020, Islentyeva 2020, Gulzar et.al. 2021, Kearns 2021, Semino 2021). Few of the studies, however, have considered the frequency of when the words are used metaphorically compared to literally in the context of the pandemic. For example, Wicke and Bolognesi (2020) did not use a manual approach when finding war-related lexical words in Twitter messages. Instead, they assumed that all war-related words that appeared in the context of Covid-19 were used metaphorically and did not apply any method to analyse the metaphors, such as MIPVU (Steen et.al. 2010). They do mention that their choice of methodology has limitations, but they did manually check a subsample of the results (Wicke & Bolognesi 2020: 13).

Other studies have also been more qualitative rather than quantitative and do not mention the frequency of the metaphors at all (e.g., Sabucedo, Alzate, & Hur 2020, Gulzar et.al. 2021, Kozlova 2021, Semino 2021). As previous studies have not applied both a quantitative and qualitative approach, they have not thoroughly studied and classified the metaphors semantically to find patterns within the metaphorical frames and structures. Applying a qualitative analysis allows for more nuanced findings and patterns to be detected. The current thesis will therefore thoroughly analyse a set of random concordance lines to compare the frequency of literal occurrences of the words to the metaphorical.

As mentioned in chapter 1, there has been a lot of criticism towards the WAR frame in the context of the Covid-19 pandemic from academia (e.g., Sabucedo, Alzate, & Hur 2020, Olza et.al 2021, Semino 2021). Those who are critical to the use of WAR metaphors claim them to be destructive in the advances against Covid-19 (especially when most of the metaphors employed concern war-related words) and argue that instead of rousing people to partake in preventative actions, the metaphors only rouse fear and anxiety which has the opposite desired effect. Studying WAR metaphors more thoroughly in the context of the

Coronavirus pandemic, however, might provide another angle to the usage of the metaphors. Their presence might not be entirely damaging, as has been shown through framing cancer as war (Semino et.al. 2017: 62). It is therefore important to look at frequency and in which contexts the war-related words appear in.

To date, there has not been any research that has compared the use of Covid-19 related metaphors in newspaper articles between Great Britain (GB), the US, and New Zealand (NZ). Comparing the occurrence of metaphors between the three countries, while keeping in mind the different measures taken to prevent Covid-19 and its impact in the three countries, might shed light on how metaphoric language has been used during the pandemic. Furthermore, the comparison might reveal possible effects the metaphors might have had, as well as how culture and historical memory might influence the metaphors (cf. 2.2.3). As the use of metaphors changes across time, comparing WAR metaphors at two different stages of the pandemic might shed light on the situation and circumstances during the occurrence of the metaphors. This thesis will therefore compare metaphorical words, their usage, and entailments, as well as their frequency and distribution across different time periods and countries.

This thesis attempts to address previous research gaps while searching for patterns in the usage of WAR metaphors to describe the Coronavirus pandemic. Furthermore, the thesis will question previous findings and hypothesis about the metaphorical framing of the Coronavirus pandemic through answering the research questions presented in section 1.2.

2.6 Discourse Analysis

All the notions about CMT, conceptualisation, and categorisation are grounded in and reflected through that people make sense of the world through language (Johnstone 2018: 73). Humans find similarities and differences that we categorise and express through speech and written texts, which is how the world is shaped. Language thus in turn can shape the way we think (Gee & Handford 2012: 5). A good method for studying human reasoning and cognition is therefore through language. As metaphor constitutes a big part of our language, as discussed throughout chapter 2, it is interesting to study how figurative language might express ideologies, thoughts, and ideas.

Discourse analysis is the study of actual instances of language in use (Gee 2011: ix). More specifically, Discourse analysis is the study of language in context that looks above the level of syntax, morphology, and phonetics and rather considers chunks of connected text

(Gee & Handford 2012: 1). Doing so provides information on how language in use is structured and what semantic meanings language might convey. Discourse analysis might then shed light on what intentions speakers have, as well as their worldview (Johnstone 2018: 76).

The exact definition of discourse has therefore been difficult to form as it is a topic that has been much discussed in the literature (Baker 2006: 3–5). This stems from the fact that discourse has been used in a variety of fields, like social and linguistic studies, which have applied different approaches (ibid.: 3). For each field of study, different definitions of discourse have been used, which is why pinpointing a single definition is difficult. One definition that is relevant for this thesis is that of Gee's (2005: 21), where discourse is considered as "ways of combining and integrating language, action, interactions, ways of thinking, believing, valuing, and using various symbols, tools, and objects to enact a particular sort of socially recognizable identity."

Gee's definition is broad and concerns every aspect of human interaction, such as gesticulations, physical surroundings, and other non-linguistic actions. Since this thesis is mainly focusing on metaphors and linguistic tools to express ideologies and thoughts, Burr's (2015: 74) definition is also relevant. She defines discourse as "a set of meanings, metaphors, representations, images, stories, statements and so on that in some way together produce a particular version of events."

Burr's definition is narrower and concerns more the usage of language and linguistic representation, which fits the purpose of this thesis better. She further states that discourses vary, all of which tell a version about the world and represent it in different ways (Burr 2015: 75). It is therefore natural to conclude that conversations, newspaper articles, e-mails, gestures, sign language, and other spoken or written language in use to be different types of discourses. The discourse types relevant for this thesis are online newspaper articles and magazines.

This thesis will also operate within in the tradition of Critical Discourse Analysis (CDA). As Charteris-Black (2014: 86) writes, CDA is when the social context and the underlying motivations and purposes of the metaphors are taken into consideration (ibid.: 200). It is also typical in CDA to consider the possible effects the choice of language and framing might have on the social relations (ibid.: 84). The metaphorical framing of WAR will be discussed considering the effects they might have, possible correlations with society, and the situations in which the countries found themselves in at the time frame of the data (April

2020 and April 2021). The typical procedure for interpreting metaphors in the CDA approach is like that of MIP and MIPVU (cf. 3.3), only that the broader social and political contexts will also be considered (Charles-Black 2014: 176).

2.6.1 Online newspaper articles and magazines

There are several reasons why online newspaper articles and magazines are relevant in the study of discourse, language, and metaphors. First, they reach a large audience who rely on the sources to be informed of certain events and topics, possibly affecting conceptualisation and worldview more so than other sources. Second, the language in newspaper articles is typically more formal and uses more standardised language, whose traits can more easily be found in dictionaries and grammar books (Pragglejaz Group 2007: 23). This is also reflected through studies that have found less uncertainty between researchers when interpreting metaphors in newspaper articles compared to other discourse types (Steen et.al. 2010: 59, Pragglejaz Group 2007: 21). Third, newspaper articles are planned discourse (Steen 2010: 44), as compared to immediate oral speech (Johnstone 2018: 209), which leaves the author more time to frame topics in desired ways. What metaphors are applied to frame a certain topic in planned discourse can then reflect more the speaker's intention than in spontaneous oral speech.

The usage of metaphors in newspaper articles and magazines are also diverse. It is, for example, typical to find a high occurrence of mixed of metaphors within a single paragraph (Kimmel 2010, Kövecses 2018: 131), and especially headlines in articles have shown to use metaphors that are more adapted to the topic and context (Aitchison 1987 in Kövecses 2018: 136). Studying the usage of metaphors in online newspaper articles concerning the Coronavirus pandemic, is then interesting in relation to the ideology of the writer, as well as the entailments and framings the metaphors might evoke.

2.7 Metaphors outside of Conceptual Metaphor Theory

Even though this thesis is based on the cognitive linguistic field and follows the tradition of CMT, it is important to mention the relevance of metaphors in other areas and the overall effect they can have on discourse. Like other persuasive techniques commonly used in discourse, such as logical syllogism, rhyme, and repetition, metaphors can be used to alter, shape, and frame topics in certain ways (Johnstone 2018: 97). The persuasive effect does not necessarily relate to the conceptualisation of the world, as it can also concern the literal effect.

This view is more in line with the classical view where metaphors are considered to induce insight and having a persuasive power (Lakoff & Johnson 1980: 189–90).

Furthermore, it could be argued that metaphors also function as rhetorical tools. It has, for example, been shown that metaphors are used to structure discourses and to make it coherent (Islentyeva 2020). As mentioned in 2.4, Boris Johnson and Donald Trump used WAR metaphors systematically at the beginning and at the end of speeches in the beginning of the Coronavirus pandemic between March and June 2020 (Islentyeva, 2020: 165), which arguably is a rhetorical tool. Grammatical patterns can also be found in metaphors that diverge with patterns found in non-figurative speech (Deignan 2005: 148). Finding patterns and regularities in the usage of non-literal language will therefore contribute to the overall understanding of language. Therefore, whether one believes that our conceptualisation of the world is fundamentally metaphoric or not, the study of metaphor is relevant as it is part of our everyday language.

3 METHODOLOGY AND DATA

This chapter presents and discusses how to apply a corpus linguistic approach to the study of metaphors in the context of the Coronavirus pandemic. The data is taken from the Coronavirus corpus, which is discussed in 3.1. In section 3.2, the approach to Corpus linguistics in relation to metaphors is discussed, as well as different approaches within the tradition of Corpus linguistics in 3.2.1. The analysis consists of two parts. The first part is based on existing research (cf. 1.2) where the corpus was searched for known metaphoric words used to frame the Coronavirus pandemic as a war. The second part of the analysis is based on findings from the initial data. The method of analysing metaphors is explained in 3.3. Section 3.4 presents the quantitative approach, while 3.5 presents the qualitative approach. The different classifications employed in this thesis are defined and presented in section 3.6.

3.1 Data

The data for this thesis is gathered from a corpus, which is generally defined as a collection of texts (Breznia 2018: 15). The texts are typically authentic, i.e., texts that represent real language in use that are not produced for the purpose of being analysed (Stefanowitsch 2020: 22–3). These texts can be drawn from a specific discourse type, like newspaper articles, or they can be collected from different types of discourses, such as interviews, articles, or TV-shows, that contains both spoken and written discourse. The former is typically referred to as a specialised corpus, and the latter is generally considered a balanced corpus (Deignan 2005: 76, Baker 2006: 26, Stefanowitsch 2020: 29). Since this thesis aims to look at newspaper articles and magazines, data was gathered from a specialised. Through analytical tools, one can search for the frequency of words and phrases in the corpus to find what is statistically characteristic of specific texts (keywords) and what words more often occur next to each other (collocations) (Baker 2006: 21). The method allows for quantitatively studying large amounts of texts, with the possibility of qualitatively analysing parts of the corpus by looking at extended contexts for the searched words and phrases. Corpus linguistics is therefore suited for the study of metaphors (see Semino 2017). The corpus that is used in this thesis is the Coronavirus corpus.

3.1.1 The Coronavirus corpus

The Coronavirus corpus was first made available in May 2020 and can be accessed through English-corpora.org. It is a subset of the NOW corpus (News on the Web corpus) (Davies 2016–), which was released in 2015 and contains data from 2010 to the present (Davies 2021: 584). The initial method for gathering texts was to find links through Google News, which were stored and then downloaded. In 2019, Microsoft Azure Cognitive Services was used instead to collect URLs (Davies 2021: 584). The corpus comprises data from 20 different English-speaking countries. The Coronavirus corpus was created by searching the existing collection of texts in the NOW corpus. Articles where words such as *COVID* or *corona* occur at least twice, and articles that contain a word string such as *at-risk, cases, confirmed, contagious, vaccine* in the title, are selected for the Coronavirus corpus. The word strings selected for the searches of the titles were based on keywords found in articles mentioning words such as *COVID* and *corona* at least three times, which is argued to be a thorough method of finding relevant articles for the corpus (Davies 2021: 588). It is possible to search for words and collocates from January 2020 and onwards. The most relevant types of searches for this thesis are the frequency of occurrences of the specific words and for concordance lines. A concordance line is the searched word, i.e., the node, and the immediate context preceding and following the node. Figure 3.1 illustrates what a typical presentation of concordance lines in the Coronavirus corpus looks like. The searched node in the figure is the lemma *combat*, which was searched by writing *combat* in caps (COMBAT). Searching words in all caps ensures that all inflections of a word appear in the results. It is concordance lines searches that allow for a close analysis.

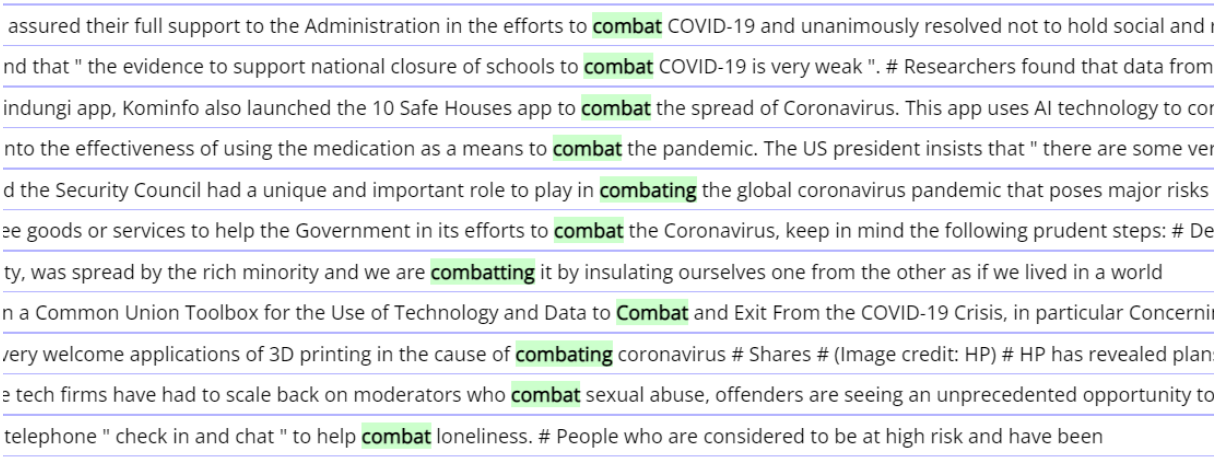


Figure 3.1 Concordance lines from the Coronavirus corpus

The corpus currently contains around 1457 million words, and it expands every day (Davies 2019–, accessed 11 May 2022). There are, however, some discrepancies and weaknesses in the corpus that need to be addressed, especially in relation to metaphor research.

First, there are some differences in size between the dates and countries. April 2020 and April 2021 are the two time periods relevant for this thesis. The period of April 2020 contains ca. 107 million words from all the 20 countries, while April 2021 only contains ca. 51 million. Furthermore, the three countries that are relevant for this thesis are the US, GB, and NZ, which have 625.4, 108.1, and 37 million words, respectively (Davies 2019–, accessed 17 January 2022). The size difference for the time periods within the same country can be explained by the media's focus being directed towards topics other than the Coronavirus pandemic during April 2021 compared to April 2020. The difference in size between the countries might be explained by the corpus having gathered less texts from some countries because of fewer online newspapers and magazines – not to exclude the difference in population size. Despite these reasons, the size difference could potentially pose some analytical disadvantages as sample size does, to some extent, correlate with representativeness (Stefanowitsch 2020: 37). However, since the frequency of occurrence of the words and the frequency of the words per million are considered, the size difference contributes to little drawbacks to this study.

Second, not all the texts in the corpus are taken from articles or magazines. During the analysis there was a need to check the original articles online, which revealed that there were some concordance lines that belonged to online commentaries. The commentaries were made by anonymous people and were therefore not part of the original articles. The mixing of different media raises some issues with the corpus. Different types of media affect fixedness and planning of texts, which again affect what type of discourse is created (Johnstone 2018: 222, 226–7). Online commentaries are less fixed and planned than articles that typically go through several stages of editing before they are published. The authors of the articles and the anonymous comments might therefore use different vocabulary, pragmatic markers, grammar, and more importantly for this thesis, metaphors. Specific discourse features might therefore appear more frequently in an article than an online comment, and vice versa. The mixing of discourse types makes the corpus slightly more balanced, as it includes online discourse in general. It was, however, impossible to distinguish all the online comments from the newspaper articles and magazines, which is why they are part of the analysis.

Third, the Coronavirus corpus is not annotated to indicate whether the searched word appears at the beginning, in the middle, or at the end of an article, or if a node appears in the title or an underline heading in the articles. As mentioned in 2.3.1, metaphors can have a bigger impact on conceptualisation if they appear early compared to later in the text (Thibodeau & Boroditsky 2011: 9), not to mention that headlines can include more context-induced metaphors to catch attention (Kövecses 2018: 136). All these different discourse features might affect how a word is interpreted and how much impact it carries.

Fourth, the Coronavirus corpus does not annotate for the authors of the texts. It is indicated where the text is from, such as being published on Fox News, CNN, BBC, etc., however, the author of the text is an important factor that affects how influential metaphors are. The more authority and power the author has, the more easily the community accepts a metaphor. The metaphor is then more likely to become part of people's conceptual systems (Lakoff & Johnson 1980: 157). Furthermore, the Coronavirus corpus, like corpora in general, does not indicate how widespread a specific text is within the community (Stefanowitsch 2020: 29). How widespread metaphors are also affects the chances of them becoming more conventionalized and contribute to how certain topics are being conceptualised, i.e., forming people's perceptions about a topic and their worldview, which again can affect people's actions (Thibodeau & Boroditsky 2011).

Despite the disadvantages, the date of publication and which country the texts originated in are annotated in the corpus. It is furthermore possible to compare the frequency of words between different time periods and between the different countries. Considering the Coronavirus corpus compiles millions of words, it should provide some viable results as to the usage and distribution of discourse features, such as metaphors. In the next section, the data collection and limitations of this thesis are presented.

3.1.2 Data collection

Metaphors are known to vary culturally (Kövecses 2010: 215, Kövecses 2022: 35), which has for example, been reflected through studies comparing English and Italian metaphors and metonymies (Deignan & Potter 2003). Furthermore, as cultural and historical memory have shown to affect metaphoric framing of the Coronavirus pandemic (Abdel-Raheem 2021), it is interesting to compare the metaphorical framing of the pandemic of different English-speaking countries that vary both culturally and in terms of their approach to and situation

concerning the Coronavirus pandemic. Three countries that fit these criteria are the US, GB, and NZ, which is why they were chosen for this thesis.

Instead of choosing several different words, the words *fight, combat,* and *battle* were chosen so that a close analysis could be conducted. The words are based on findings from existing research (especially, Wicke & Bolognesi 2020, but also Islentyeva 2020, Semino 2021, Cipolletta & Ortu 2021, Castro-Seixas 2021, Gulzar et.al. 2021). Wicke and Bolognesi (2020: 13) found that the most frequent war-related words were as follows: *fight* (29.75), *fighting* (10.65%), *war* (10.08%), *combat* (5.89%), *threat* (5.13%), *battle* (4.16%), *front line* (3.82%), and *military* (3.61%). Since *fight* especially has been reported more frequently used in previous studies concerning WAR metaphors used to frame the pandemic, it is interesting to look at the different inflections of the lemma, i.e., *fighting, fought, fight,* and *fights*. The reason for doing so is because different inflections and grammatical structures might be used differently in metaphoric expressions (Wicke & Bolognesi 2020: 9). The connotations might therefore vary, and have positive or negative associations, or be used in different semantic contexts. Furthermore, metaphorical uses of words have also been shown to be more affected by grammatical choices than literal uses of words (Deignan 2005: 162), which makes it especially relevant and important to look at all the possible inflections of a word for a close analysis of metaphors. Another grammatical pattern to consider is the distinction between nouns and verbs. As *fight, combat,* and *battle* can all appear as nouns and verbs, they are relevant for this thesis' research questions (cf. 1.2).

In the case of the lemmas *combat* and *battle,* some searches provided so few results for each inflection that searching the lemmas was more beneficial. For example, the inflection *combats* only occurs once in GB in both April 2020 and in April 2021 in the Coronavirus corpus. It was therefore easier to gather the data through searching the lemmas *combat* and *battle*. Even though the searches do not distinguish between the different forms of the lemma, the analysis distinguishes and highlights where differences and patterns occur between the different inflections.

After having decided on the countries and the initial words of interest, the frequency of the words for each country were searched using the chart function in the Coronavirus corpus. Figures 3.2, 3.3, and 3.4 provide the results from the search of *fight* in caps (FIGHT).

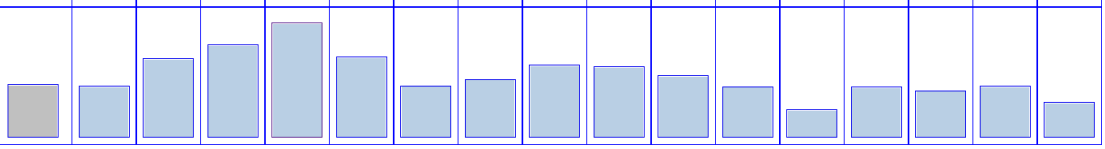
SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	5436	22	68	552	740	468	253	269	319	242	208	147	80	150	124	175	104
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.00	3.00	4.69	5.52	6.85	4.78	3.04	3.43	4.30	4.20	3.64	2.98	1.57	2.97	2.74	3.00	2.03
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 3.2 The frequency of the lemma fight *in NZ in the Coronavirus corpus*

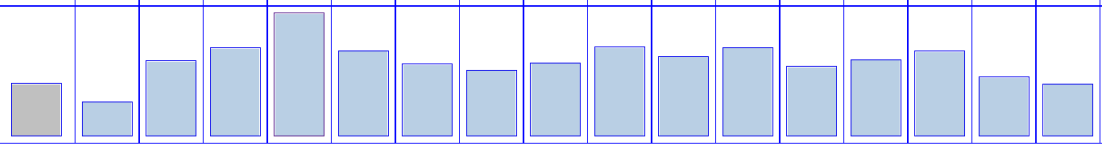
SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	19420	47	210	1699	2582	1613	1152	989	1046	990	879	842	680	743	739	658	510
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.01	6.40	14.49	16.99	23.91	16.49	13.83	12.61	14.10	17.18	15.38	17.08	13.39	14.69	16.35	11.29	9.94
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 3.3 The frequency of the lemma fight *in GB in the Coronavirus corpus*

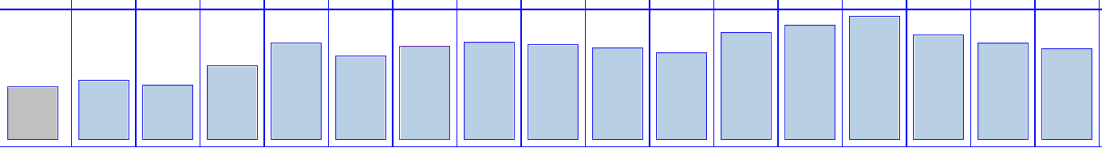
SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	142351	464	844	7950	11274	8809	8449	8302	7604	5737	5371	5742	6325	6790	5130	6107	5072
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.10	63.21	58.23	79.51	104.41	90.06	101.46	105.87	102.53	99.58	94.00	116.51	124.50	134.22	113.52	104.77	98.87
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 3.4 The frequency of the lemma fight *in the US in the Coronavirus corpus*

As can be seen, between January 2020 and April 2021 there is a peak in frequency around April 2020 for the lemma *fight* in NZ (figure 3.2) and GB (figure 3.3). There is also a peak in frequency in the US in April 2020 (figure 3.4), however, as illustrated, the US has a much more even usage of the word from April 2020 to April 2021. With the lemma *combat*, there is a peak in frequency during March 2020, with a relative high occurrence in April 2020 compared to the other months (see appendix, figures 1, 2, and 3 for screenshots of the frequency results of the lemma *combat* in the US, GB, and NZ, respectively). With the lemma *battle*, there is a peak in frequency in April 2020 for all three countries (see appendix, figures 4, 5, and 6 for screenshots of the frequency results of the lemma *battle* in the US, GB, and NZ, respectively). Data was therefore gathered from April 2020 from all three countries. The

decision was further confirmed after a statistical Log-likelihood test that compared the frequencies of the lemmas *fight, combat,* and *battle* in two different corpora (the NOW corpus and the Coronavirus corpus). The statistical analysis provided answers as to how frequent a node is in one corpus compared to another, and whether there is an overuse of a node (i.e., that it occurs more frequently) in one corpus compared to the other. The results of the tests revealed that there is a statistically significant higher frequency of occurrences for the lemmas *fight, combat,* and *battle* in April 2020 for all the countries in the Coronavirus corpus compared to the frequency of the lemmas throughout 2020 in the NOW corpus. The findings indicate that the lemmas *fight, combat,* and *battle* are used more frequently in the Corona discourse in April 2020 than in discourse generally found online throughout 2020. The Log-likelihood tests were performed using the Lancaster University Centre for Corpus Research on Language (*Log-likelihood* n.d.), and the results are presented in table 3.1. Screenshots of the Log-likelihood tests can be seen in the appendix, figures 7, 8, and 9.

Table 3.1 Results from the Log-likelihood statistical tests

		Coronavirus corpus (April 2020)	NOW corpus (2020)	Overuse (+)/ Underuse (–)	LL
FIGHT	Frequency (n)	39 743	567 791	+	508630.2
	Corpus size	108 000	2 607 800 000		
COMBAT	Frequency (n)	9 913	116 665	+	130566.6
	Corpus size	108 000	2 607 800 000		
BATTLE	Frequency (n)	13 497	273 748	+	163550.5
	Corpus size	108 000	2 607 800 000		

There is a clear overuse of the lemma *fight, combat,* and *battle* in the Coronavirus corpus in April 2020 compared to the NOW corpus in 2020. The higher frequency of occurrence of the words in April 2020 makes it an interesting time-period to study.

Following the decision for April 2020, data from April 2021 was gathered to compare the usage and frequency of the words a year later in the pandemic. The first period reflects how the virus and the pandemic were framed around the time the world first started going into lockdown and death rates started rising (see appendix, figure 10 for a figure on daily corona-related deaths in the UK, US, and NZ). The second period reflects the framing of the pandemic when new variants of the virus started appearing, and when the vaccine had been in circulations since December 2020 (see appendix, figure 12 for a figure on the percentage of people who completed the initial vaccine trials in the UK, US, and NZ). The situation surrounding the discourse of the Coronavirus pandemic in the three countries is discussed in chapter 4 along with the results of the data.

For each of the nodes, 100 random concordance lines were chosen for the qualitative analysis. The randomised selection of concordance lines is a typical approach in limiting the number of results (Tribble 2010: 176). The reason for doing so is because of the fine balance to find searches that provide a feasible number of results, and as Hunston (2010: 162) points out, patterns might be difficult to spot if there are too many concordance lines. Furthermore, there were a few searches that produced less than 100, simply because the frequency of the word was not high enough in the selected time-period and country. To achieve a balanced and comparable number for all the three countries across the two time periods, 100 concordance lines were gathered. Despite the disadvantage of the low frequency for some searches, the low frequency is itself an interesting finding, and looking at the patterns and usage of the low-frequency words might provide important insights into the framing of the Coronavirus pandemic. All the data was therefore included in the analysis and results.

Through the analysis of the data, especially with the lemma *combat*, the phrase *the spread of* occurred frequently in a pattern. The detection of the pattern initiated the second stage of the analysis that allowed for a more general analysis of metaphors used in the context of the Coronavirus pandemic. Furthermore, the analysis allowed to see the distribution of WAR metaphors compared to other metaphorical frames. There are several reasons for why *the spread of* is relevant for this thesis. First, the phrase *the spread of* allowed for a search where the pandemic and the virus appear in a noun phrase, which was otherwise impossible to achieve with searching *Corona, virus,* or *pandemic* as those words produced too many results

for the corpus to process. Second, the phrase frequently precedes words and phrases such as *the virus, the coronavirus, the coronavirus pandemic, Covid-19, COVID, infection*, and the like, that encapsulate a variety of words and expressions used to address the pandemic and the virus itself. The search was then not limited to just *virus*, for example. Third, the phrase allowed to see how frequently it occurs in a metaphoric context compared to a literal one, and how frequent the WAR-metaphorical frame is compared to other metaphorical frames and expressions. Baker (2006: 169) also points out that searching 'thinned' concordance lines, i.e., a smaller number of concordance lines, might reveal patterns that might otherwise be missed. Following the same procedure as with the inflections of *fight* and the lemmas *combat* and *battle*, 100 random concordance lines were gathered from each country from each time-period.

3.1.3 Challenges with data collection

Occasionally, when searching for 100 random concordance lines, only 99 appeared as it had left a random concordance line out. To compensate for this, a random line from the corpus that did not already occur in the 99 lines was retrieved. Furthermore, some searches provided less results than first displayed in the corpus. For example, the corpus states that the search for *fighting* in NZ April 2021 contains 37 concordance lines, but only 30 concordance lines were provided when looking at the context. In the results and calculations of frequency for the qualitative analysis, the number of concordance lines that were provided in the data gathered were relied on, and not the frequency the corpus states. For the quantitative analysis, the results provided from the corpus were used.

3.2 Corpus linguistic approach to metaphor

Finding patterns in a language or discourse situation can provide insightful information into how language is structured, the processes behind it (Johnstone 2018: 50), and evidence of the meanings of words (Stubbs 2001: 16). Especially patterns that are repeated is an indication that an understanding or a conceptualisation of a topic is not individual but is shared by the whole speech community (Stubbs 2001: 215). With metaphors especially, the more frequently they occur, the more conventional they are considered, which makes them significant for the community of study and discourse situation (Deignan 2005: 124, Kövecses 2010: 34). From the perspective of CMT, conventional metaphors structure our conceptualisation of the world the most (Lakoff & Johnson 1980: 55, Kövecses 2010: 35), which makes studying the

frequency of metaphors insightful. Finding patterns and frequently occurring metaphors would require analysing large collections of texts, which is possible through the tools of corpus linguistics.

There is evidence that applying a corpus linguistic method proves more sufficient than a lexical approach (Kövecses et.al. 2019: 161), which is a method that relies on investigating lexical items in sources like dictionaries, thesauri, and collocation dictionaries (ibid.: 151). Kövecses et.al. (2019: 166) found through their study of *surprise* that some conceptual metaphors could only be found in the corpus linguistic approach data, while all the conceptual metaphors found through the lexical approach data were also found in the corpus linguistic data. The corpus linguistic method is therefore suited for this thesis' research questions.

As of now, there is not a single accurate quantitative method that can be applied to the study of metaphors, which is why manually analysing some parts of the quantitative data is necessary (Deignan 2005: 92–3). The quantitative data is gathered through frequency searches in the corpus, while the qualitative analysis is done manually (Hunston 2010: 158) through a close analysis of the extended context of some parts of the data. There is, however, a method that uses a semantic annotation tool to analyse metaphor in a corpus (Wmatrix) (Koller et.al. 2008: 141). The method allows for the automatic finding of Source Domains through first applying a manual input of lexical items (ibid.: 143). Even though this proves a more efficient method, it is necessary to manually check the automatically generated results as there is a chance of idiosyncratic results. Furthermore, new metaphors cannot be detected (Koller et.al. 2008: 143). The data was therefore manually analysed.

There are also a few other limitations to the usage of corpus linguistics. One important point to keep in mind is that even though it is possible to check the extended context of searched words, corpus linguistics is the study of partially decontextualized data (Baker 2006: 181). There might, for example, be pictures or videos in an article or a magazine that affect contextualisation, but which will not appear in a corpus. Paralinguistic features like different fonts or colours are also not annotated in the corpus, which are features that might highlight some words and downplay others. The partial decontextualization of the texts slightly obscures the ideology, connotation, or intended meaning behind words and phrases (Baker 2006: 18).

Furthermore, through studying metaphors that the speakers/writers use, it is possible to uncover the ideology behind their utterances (Stefanowitsch 2020: 432). However, there are also difficulties in interpreting the meaning of other speakers/writers. For example, "they

were fighting" might refer to a literal fight where physical violence was performed, or it might refer to a disagreement with no physical confrontation. The extended context might reveal more about the situation, however, not always. In some cases, the only option is to ask the writer of the text for the intended meaning – something that is not possible in a corpus linguistic study. Even though connotations of words do not typically have personal and emotional associations, otherwise the words would not have been frequently used (Stubbs 2001: 35), it is important to address that connotation can vary between individuals (ibid.: 20). The connotational and interpretational differences are biases to be aware of and are factors that might affect the researcher's interpretation.

However, since a corpus is a collection of thousands of texts and can comprise up to millions of words, there are several research biases that are more easily avoided (Baker 2006: 11). For example, the primacy effect, where information provided earlier appears more significantly than others, will be less prominent since the searches in a corpus are typically done randomly. Furthermore, confirmation bias, where one seeks to confirm one's hypothesis or claims, can also be avoided through corpus linguistics, depending on the method of searches (Baker 2006: 11). In corpus linguistics, there are two main approaches, the corpus-driven and corpus-based.

3.2.1 Corpus-driven and Corpus-based approaches

The first part of the analysis is inspired by previous research on metaphors used to frame the Coronavirus pandemic (cf. 3.1.2), and all the words are therefore based on findings from articles. The method applied therefore leans more towards what has traditionally been classified as corpus-based, and not corpus-driven (Tognini-Bonelli 2001). A corpus-based approach is a method where the researcher checks the corpus with a predetermined hypothesis or to confirm or disconfirm researcher's intuition (ibid.: 65), which is what this thesis is doing by looking at known metaphoric constructions. A corpus-driven approach, on the other hand, uses the corpus as data to find regularities and explanations of use (Tognini-Bonelli 2001: 84). The reason for discarding this option for the thesis was to look at the usage, frequency, and distribution of previous findings and claims about the WAR metaphors.

Generally, a corpus-driven approach has been favoured over a corpus-based one, as it has been argued that the corpus-driven approach starts off with a 'clean slate' with no assumptions (Deignan 2005: 89). The 'clean slate' assures that the hypotheses are solemnly drawn from the language data, not the other way around, which naturally contributes to

reducing researcher's bias. However, a corpus-based approach can be useful if it can be combined with a corpus-driven one. Instead of confirming the existing perceptions about a language, as in this case, pre-existing perceptions of the metaphorical framing of the Coronavirus pandemic, one can examine the corpus and test previously held beliefs (Deignan 2005: 90). This approach has been named standardisation and takes a more empirical approach within the corpus-based approach (Tognini-Bonelli 2001: 71). Since the aim of the first part of the analysis is to test predetermined theories of metaphors used to describe the pandemic and to see how they are used, the standardisation corpus-based approach was applied.

The second part of the analysis, on the other hand, is based on findings from the first analysis. The latter approach therefore leans more towards a corpus-driven approach because the corpus provided a phrase to be analysed. However, it is not a fully corpus-based approach, as it still aims to answer a predetermined hypothesis. The mixing of approaches is typical to metaphor studies since metaphors can only be identified through manual analysis by humans (Deignan 2005: 198). Even automatic analysis of metaphors requires an initial stage of determining the lexical inputs (e.g., Koller et.al. 2008: 143). Elements from both the corpus-driven and corpus-based approach are therefore reflected in the second stage of the analysis.

3.3 Analysing metaphors

Analysing a text or concordance line for metaphors implies distinguishing between literal and metaphorical uses of words (lexical units), which might not always be apparent. As mentioned in 2.2.3, the interpretation and usage of metaphors vary intra-culturally, i.e., cross-culturally, as well as inter-culturally, i.e., within a culture (Kövecses 2010: 215). Furthermore, there are individual differences, such as personal history, that might affect the usage and interpretation of metaphors (ibid.: 225–6). Because of the range of factors that affect metaphors, it is important to apply a thorough and consistent method to analyse and interpret figurative language.

One consistent method that allows for structured metaphor analysis is Metaphor Identification Procedure (MIP) by Pragglejaz Group (2007: 3). MIP consists of a four-step approach which are, paraphrased and simplified, as follows:

(1) Read the context to get a general understanding of the meaning.
(2) Determine the lexical units.

(3) Determine each individual word's established meaning in the context, i.e., what precedes and follows the word, and check if the individual words have a basic meaning in other contexts that contrasts with the contextual meaning.
(4) If the basic meaning contrasts with the contextual meaning, then it is a metaphor.

MIP has been used frequently by metaphor analysts since it was published and can be applied to studies in a variety of fields (e.g., psycholinguistics, anthropology, linguistics) (Pragglejaz Group 2007: 34–5). The method, however, does not consider conceptual domains, as it is only a method to identify lexical metaphors and not conceptual metaphors. Furthermore, certain forms of figurative language that might be considered as metaphoric, such as similes,[5] analogies, and implicit expressions caused by substitution or ellipsis (omission), are not included (Steen et.al. 2010: 21). MIP is therefore limited to identifying indirectly expressed metaphors only, which is why Steen et.al. (2010) developed the theory further to include other types of metaphoric expressions (renamed MIPVU). However, these types of metaphors were rare in the data, and when they occurred, they did not occur within the context of the Coronavirus pandemic. Their inclusion of other metaphor types allows for more nuanced analysis and classifications. For example, MIP would classify the verb *dog* and the noun *dog* as a single lexical unit because the words have the same base form (Pragglejaz Group 2007: 16). MIPVU, on the other hand, would classify the words separately, as they consider word classes rather than lemmas in their classification (Steen et.al. 2010: 16). Because of their different approaches in metaphor identification, the results their method provide will also vary. Since this thesis focuses on a thorough analysis of metaphors but also includes a quantitative analysis of the data, it draws mostly on MIP and the other metaphorical language structures that MIPVU addresses, such as similes and analogies. Furthermore, the analysis categorises and distinguishes separate lexical units like the noun *fight* and the verb *fight*.

The thesis does not, however, analyse and categorise metonymy, which is as mentioned in 2.2, the phenomenon in which one aspect of a single frame can be used to define the whole frame (Kövecses 2006: 97).

[5] A simile is a direct comparison and contains words such as *like* and *as* (Kövecses 2010: ix), e.g., "clever as a fox".

3.4 Quantitative analysis

The quantitative analysis of the data is based on the frequency of the words and the results from the qualitative analysis, as well as the frequency overall in the Coronavirus corpus. Because of the issue with the infrequent results provided by the corpus, where the number of results first displayed in the corpus during a certain time period might be incorrect (cf. 3.1.3), the results displayed in the Coronavirus corpus had to be relied on. The reason for doing so is to be consistent in the analysis and the data, as it was impossible to check whether all the frequencies displayed by the corpus were correct.

3.5 Qualitative analysis

After having gathered 100 random concordance lines for the inflections of *fight* and the lemmas *combat* and *battle,* the data was converted onto an Excel sheet. The Excel sheet allowed for colour coding and word tags for verbs/nouns, topics, contexts, and tense, which provided an easy method for sorting to find additional patterns that would otherwise have been missed. MIP and some modifications of MIPVU were followed throughout the analysis.

During the first read-through of the data, the topics the concordance lines belonged to were tagged. Every time the words were used to refer directly to the Coronavirus pandemic, they were usually used metaphorically. Through the initial analysis, patterns and interesting features emerged, which is why many of the semantic contexts and findings were tagged *after* the initial analysis of the concordance lines. The most interesting patterns that presented themselves were the semantic contexts. After the identification of the patterns, the concordance lines were analysed at least once more. For some of the data a third analysis[6] was necessary to make sure that no patterns of importance might have been missed, that the categorisations were correct, and to re-classify and re-group the concordance lines into feasible and presentable results. These steps are in line with recommendations from MIP (Pragglejaz Group 2007: 36). The additional analysis further functioned as an intra-rater reliability test, which was calculated to be around 94%.[7]

Other discourse features that were tagged are lexical units. For example, the words *fight, fights, fighting, battle, battles, combat, combats,* and *combating* appeared both as nouns and verbs, which were tagged accordingly (following MIPVU (Steen et.al. 2010)). In the case of *combat* and *battle,* the lemmas were searched instead of each inflection. The inflections

[6] The third analysis took place several weeks after the second analysis.
[7] For every 300 concordance lines, about 18 had to be re-classified.

were therefore tagged through the analysis. Grammatical structures also affected the metaphors and what contexts they appeared in. For example, the phrase *fought off* following phrases such as *the virus* and *corona*, almost always denoted a person having recovered after contracting Covid-19.

The approach for the first part of the analysis is similar to what Deignan points out as a discourse approach to metaphor research (2005: 124). By semantically grouping the linguistic metaphors together, conceptual metaphors are suggested to be accountable for them. The entailments to the conceptual metaphors are analysed to see what aspects of the pandemic they highlight. Lastly, the frequency of the linguistic metaphors might be provided as an example of significance and proof of conceptual metaphors.

The analysis of *the spread of* required another type of analysis as it was the immediately preceding and following words and phrases of *the spread of* that were checked for metaphoricity, and not the phrase itself. The surrounding context of *the spread of* was then analysed to see what conceptual metaphors occurred. In cases where it was unclear whether a word was used metaphorically, or to just make sure that a metaphor was not 'dead' or historical (cf. 2.2.3), the Oxford English Dictionary (*OED* 2022) and Macmillan Dictionary (*Macmillan* 2022) were used to check if there was a basic meaning of the word that contrasted with the usage in the specific context of the concordance line. The usage of dictionaries is in line with step (3) of MIP (cf. 3.3). It is important to point out that the basic meaning of a word might not be the first entry in a dictionary or the most frequently used meaning of the word (Pragglejaz Group 2007: 3). Furthermore, the definition of a basic meaning can vary, especially the basic meanings of grammatical and delexicalized[8] words might be difficult to determine. For example, *make progress* can be considered a metaphor if the basic meaning is thought of as the physical construction of an entity, not an abstract one, such as *progress* (ibid.: 29). The procedure of MIP was followed in such cases, which is to consider phrases like *make progress* as metaphorical.

3.5.1 Analysis challenges

Deciding whether an expression to be metaphorical or literal, has been shown to vary between analysts. There have, for example, been studies that reflect varying degrees of disagreement amongst the analysts (Pragglejaz Group 2007: 21–2, Steen et.al. 2010: 161). MIP and MIPVU

[8] Delexicalization is a process in which words become more grammatical and therefore loses some of its original, concrete, lexical meanings (Brinton & Traugott 2005: 102).

are attempts to try to minimise the biases and increase agreement between analysts so that the identification of the metaphors is as standardised as possible. This was reflected through the intra-rater reliability test which scored 94% (cf. 3.5). However, it is important to keep in mind that it is impossible to eliminate all biases, so difference in interpretation might occur between different interpreters.

Furthermore, throughout the analysis, some challenges concerning ambiguity with the data and the accessibility to the extended contexts through the corpus arose. Some links that lead to the original source where the node appeared were not reachable from Norway or had been deleted. Also, further into the analysis, the corpus updated their page, which caused the extended context not to be displayed at all. In the latter part of the analysis, the original newspaper articles and magazines therefore had to be relied on to access the extended context. Since it was difficult to check the extended context of some of the concordance lines, it left room for some ambiguity and analysis errors. However, this issue appeared rarely and did therefore not interfere with the overall analysis and results. When they did occur, the node was tagged as metaphoric and as not appearing in the context of the Coronavirus pandemic. This issue happened once every 300 concordance line.

3.6 Classifications

3.6.1 Topical context

Topical context refers to the overarching topic of the concordance line, i.e., whether it refers to or appears in the context of topics such as the Coronavirus pandemic, sports, economics, or climate change. Topical context is referred to as topic from here on. The topics that most frequently occurred in the data other than the Coronavirus pandemic, which could be classified, were other diseases such as AIDS, cancer, the flu, std, tuberculosis, and the like, misinformation about the Coronavirus, vaccine hesitancy and scepticism, economic and physical aftereffects of the pandemic and the Coronavirus, literal topics, and other metaphorically used topics such as economy, politics, climate change, personal issues, and struggles.

When categorising the topic of the concordance lines, and to see whether they were used metaphorically or not, several methods were applied. It was mostly sufficient with reading through the concordance lines the corpus provided, which were either partial or full sentences that surrounded the node (cf. 3.1). Otherwise, it was sufficient to look at the extended context that revealed 10–20 sentences more than the single concordance line

presented in the initial results. However, there were a few contexts when having to read larger parts of the text was necessary. The process proved to be time-consuming, though important in order to get a thorough and correct analysis (see 3.1.3 for challenges). Especially concerning the inflections of *fight* and the lemmas *combat* and *battle*, the topic was important to establish to see whether the words were used metaphorically or not, and it further made it easier to lump together the concordance lines that concerned the Coronavirus pandemic. The inflections of *fight* and the lemmas *combat* and *battle* were always used metaphorically when they appeared in the topic of the pandemic, while *the spread of* did not always occur in a metaphorical construction even though it was used in the topic of the pandemic. The latter analysis therefore required more thorough use of MIP to see whether it appeared in a metaphoric context or not.

After having tagged and sorted the topics into Coronavirus pandemic and the other non-pandemic related topics, the immediate semantic contexts of the nodes were analysed. As mentioned, it was analysing the immediately preceding words and phrases for metaphoric words that was of interest with *the spread of*. The next section will outline the semantic contexts used to analyse *fight* and the lemmas *combat* and *battle*, followed by an explanation of the metaphorical analysis of *the spread of* and the conceptual metaphors that were discovered through the analysis.

3.6.2 Semantic context

Semantic context refers to the immediate semantic context surrounding the node and will only apply for the analysis of the inflections *fight* and the lemmas *combat* and *battle*. Semantic context is referred to as context from here on. To identify the different context categories, a manual analysis was conducted where semantically related words were tagged and grouped together. For example, in the case of money, when words such as *fund, money, donation,* and *donate* occurred, or when verbs such as *provide* or *give* occurred in the context of specific amounts of money, they were considered as denoting resources, e.g., "…the Bill & Melinda Gates Foundation donated $10million to help *fight*[9] the virus" (20-04-10 GB).[10]
(See appendix, table 1 for more examples on concordance lines that were classified as resources in the form of money).

[9] Important words are italicised in all the examples taken from the data throughout the thesis. The words are not italicised in the original.
[10] The dates follow the pattern year-month-day as presented in the Coronavirus corpus.

Some contexts included the occurrence of other metaphors such as "…the science is *coming along* and the medical advances that we're *making* to fight this thing makes me very positive." [italics added] (20-02-10 US). In the sentence, both "science is *coming along*" and "advances that we're *making*" can be considered as metaphors. This is because *make* can be interpreted as the creation of an object coming into existence (*Macmillan* 2022, accessed 4 February 2022) and *come along* denotes a physical movement from one place to another (*Macmillan* 2022, accessed 4 February 2022), which are meanings that contrast with the meanings in the phrases. The extended phrases and expressions were not, however, metaphorically analysed or classified. The phrases were rather semantically classified together as denoting medical advances under the category resource as they expressed contributions to the 'fight' against the pandemic. The reason for doing so is because the thesis looks at the semantic contexts of the metaphorical words *fight, combat,* and *battle,* i.e., whether *fight, combat,* and *battle* are used metaphorically or not and in what context they appear in. It would otherwise have been too time-consuming since it is common to mix metaphors (cf. 2.6.1). Future studies, however, could look at the extended contexts of the metaphors and investigate what other metaphorical expressions and words are used in the surrounding context of the WAR metaphors. More on the topic of future directions is discussed in section 5.1.

During the classification and identification of the contexts, some issues arose. There were some concordance lines that were difficult to classify as they could have been considered to belong to two or more contexts.

(1) …contribute to our country's great efforts to *fight* against this pandemic. (21-04-13 US)

(2) Working together is more important than ever in the *fight* against COVID-19. (21-04-10 GB)

Sentence (1) could have been classified as unity, because it alludes to a collective 'fight' through "our country's great efforts". However, since the overarching meaning of the sentence is 'efforts', it was classified as belonging to the context of effort. Sentence (2) as well implies some sort of effort through 'working', however, the overarching context is that of 'working together', which is why it was classified as unity.

The categories were first found after having read through the concordance lines once, and were narrowed to eight separate categories: *effort, unity, restriction, resource, method,*

situation, body, and *other* (the context categories are written in italics from here on). The categories include both positive and negative associations. In the next section, more detailed description and justification of the context classifications are provided. Table 3.2 contains an overview of all the semantic categories.

Table 3.2 Semantic context categories

Semantic category	**Meaning**
Effort	Refers to any attempt, contribution, or help that is either being provided, has been provided, is going to be provided, or an expressed need for effort.
Unity	Appeals to solidarity and cooperation in the community.
Restriction	Refers to restrictive measures that are either posed, have been posed, or is going to be implemented that limit people's everyday activity and lifestyle to various extents.
Resource	Refers to both material resources such as medicine, money, and equipment and immaterial resources such as knowledge, that is being contributed, has been contributed, is going to be contributed, or an expressed lack of it.
Method	Refers to any actions or steps taken that are not specified, or actions that do not directly relate to the pandemic.
Situation	Refers to the state and circumstances concerning the pandemic and situates it within a time-perspective, or involves a comment on the state and situation itself.
Body	Refers to people's personal struggle with the virus itself.
Other	Refers to other semantic categories that did not fit into the other categories. It only includes semantic contexts that refers to the Coronavirus 'fighting'.

Effort denotes an attempt, contribution to, or help towards overcoming the pandemic that is either unspecified or directly expressed as *effort*. The context might encourage the reader to partake in the efforts to help in the pandemic, to continue providing effort, or expressing lack of it.

(3) …brave and tireless NHS frontline staff *battling* in vain to keep them alive. (20-04-09 GB)
(4) Efforts to *combat* the spread of the coronavirus have produced a plastics surge. (21-04-22 US)
(5) We wake, work, *fight*, eat, drink, *fight*, and we forget to sleep. (20-04-05 NZ)

Effort can therefore be a statement on the work provided by healthcare workers as in sentence (3), where the effort is directly expressed through the progressive verb *battling*. Example (4) is also considered as *effort* as it directly mentions the word *efforts.* It furthermore concerns effort that has already been provided in 'fight'. Finally, *effort* can also be expressed through an action with indirectly implied effort towards the pandemic as in sentence (5). Sentence (5) is furthermore a statement from a healthcare worker to emphasise the extreme efforts being provided by them through expressing that nothing but necessities, like eating and sleeping, are done other than fighting.

Unity involves expressions that in some way appeal to solidarity and cooperation, either within the community (i.e., within the countries) or the whole world. Typically, this category urges for cooperation or states that solidarity has contributed to positive outcomes of the pandemic, such as low rates of death and stopping the spread of the virus.

(6) We've been 'United, in the *Fight* Against Covid-19'. (20-04-05 NZ)
(7) Let's beat this COVID-19 boss *battle* together. (20-04-18 US)
(8) While the world comes together to *combat* this public health emergency… (20-04-09 GB)

Solidarity can be expressed directly through words and phrases such as *unity, stand together,* and *collective*. Sentence (6) expresses unity directly through *united* and the use of the personal pronoun *we,* while it is expressed through words such as *together* and the adhortative *let's* as in sentence (7). Example (8) also belongs to *unity* through that it addresses that the 'whole

world' is contributing to the same fight. Similarly, sentences that mention the countries by the name, for example, *New Zealand's fight* is considered as *unity* when it appears in the NZ data, but not if it appears in the other countries' data.

Restriction denotes the restrictive measures or specified actions taken to prevent the spread of the virus. The restrictions can either be expressed through specific measures having put in place, such as *staying at home* and *national lockdown*, or they can be expressed through words such as *restriction* and *measure*. The restrictions are either put in place, lifted, or encouraged, and affect the society and the citizens in some way.

(9) …businesses shut down to *fight* the spread of the COVID-19 coronavirus… (20-04-10 US)

(10) France became the latest country to impose new restrictions to *combat* mounting infections. (21-04-30 GB)

(11) …we'd be entering alert level 4 to fight an invisible *battle* against Covid-19 back in March… (20-04-02 NZ)[11]

Sentence (9) is therefore considered as *restriction* because it expresses the action of businesses having to close in order to stop the spread of the virus. Closing a business restricts the lives of the people who own and work for that establishment. Direct mentioning of *restriction* in a sentence is also considered as *restriction* when the action is implemented to stop the spread of the virus as in (10). Sentences that express national lockdowns and measures that restricts the citizens' lives as in sentence (11), are also considered as *restriction*.

Resource involves resources such as money, equipment, medicine, or knowledge, that are or have been used to contribute to the 'fight'. An expressed need for resources is also included in this category, as well as evaluations of the usefulness and functions of the resources. The resources can either be expressed through mentioning specific resources such as amounts of money, specific equipment, such as protective masks, tracing apps, or it can be expressed through using the word *resource*. Human resources are also considered to be part of this category, like medical staff. Each sub-category is classified depending on their semantic relation, for example, knowledge concerns studies, experience, and medical progress.

[11] The sentence appears in the data for the lemma *battle*, however, the word *fight* also appears in the sentence.

(12) …many experts in NZ are not being utilised in many sectors to *combat* Covid-19… (20-04-06 NZ)

(13) …to see if Ifenprodil could help in the world's *fight* against COVID-19. (20-02-20 GB)

(14) …in hopes of donating additional PPE to state and local agencies *battling* COVID-19. (20-04-08 US)

Sentence (12) is then considered as *resource* because it addresses experts, i.e., human resources, who are needed to help in the pandemic. *Resource* can also be expressed through mentioning of specific medicines like Ifenprodil, which is a medical substance that could save lives from the virus, as in (13). Furthermore, sentences that concern Personal Protective Equipment (PPE), as in (14), where a donation of PPE towards stopping the spread of the virus is expressed, are considered as *resource*.

Method is a category that includes words such as *approach, way to, strategy,* and *steps taken*. Actions or methods used to contribute to the fight against the pandemic are characteristics for this group. The methods are more often unspecified, however, there are some specific methods that are included in this category, such as testing and vaccination, or other methods that are not specifically related to the pandemic.

(15) We discussed the steps being taken to strengthen the *fight* against the pandemic. (21-04-24 GB)

(16) Now is the time to focus on a *battle* plan for slowing the virus explosion. (20-02-21 US)

(17) We have no choice but to *combat* coronavirus as aggressively as we can. (20-04-02 GB)

Sentence (15) is considered as *method* because the words *steps being taken* are used to express the methods applied to 'fight' the pandemic. Example (16) is considered as *method* because it expresses a plan to lower the spread of the virus. Furthermore, statements on the way in which the situation of the pandemic is going to be handled, such as aggressively as in (17), are also then considered as *method*.

Situation refers to all the contexts when the pandemic or the coronavirus is referred to as a state, period, or situation. The category can include sentences that denote progress, prospects (e.g., to win the 'fight'), different phases of the pandemic, or comments about the

situation, such as being *unprepared.* The category can also refer to something happening during the pandemic that might not directly relate to the pandemic or contribute to the 'fight', i.e., it concerns actions or situations that do not contribute to it such as *resources*, *restriction*, and *effort* do. Words and phrases that are frequent in this category are *during, in the (ongoing) fight,* and *this fight.*

(18) The next two weeks will be crucial in the United States' *fight* against the coronavirus. (20-04-13 NZ)
(19) The PM warned the coronavirus *battle* is at the point of 'maximum risk'. (20-04-26 GB)
(20) …we're about to enter the hand-to-hand *combat* phase of the war. (21-04-12 US)

Sentence (18) is then classified as *situation* because it refers to a period of the pandemic, i.e., "the next two weeks". That stage of the pandemic is furthermore described as being more crucial than other weeks. Example (19) is also considered a *situation* because it is a comment on the state of the pandemic, i.e., that it is at a crucial point. Furthermore, sentences that comment on the pandemic in terms of phases, like sentence (20), is also considered as *situation*. Sentence (20) is similar to (18) except that it does not describe the state of the pandemic as the former does.

Body includes sentences that refer to a person's confrontation with the virus, which is either implicitly or explicitly mentioned as fighting with their 'body'. The category also includes when more specific bodily functions and reactions are portrayed as 'fighting', such as *antibodies* or *the immune system*. The latter could be argued not to be metaphorical since the immune system is, in a way, engaging in 'physical confrontation' with foreign matters like viruses as it tries to kill them. However, the more basic definition and usage of *fight* can be interpreted as "to contend in battle or single combat" (*OED* 2022, accessed 1 February 2022), which makes it possible to categorise it as figurative language since the immune system and viruses do not engage in battle or combat in the sense as humans do.

(21) Prime Minister Boris Johnson returns to work Monday after his own *battle* with coronavirus. (20-04-24 GB)

(22) …while antibody treatments help your immune system *fight* a virus. (20-04-01 US)

Sentence (21) is then considered as the context *body* because the speaker indicates that the Prime Minister has actively contributed to getting better through fighting the virus. Furthermore, when the immune system 'fights' the Coronavirus as in sentence (22), it is also considered as *body*.

Other includes contexts that could not fit into the other categories. The category occurs infrequently, only twice with *fight* and its inflections, because of the broad categories applied. When *other* occurred, however, it was used to frame the Coronavirus as being the one to 'fight'.

(23) …the virus can find mutations that allow it to completely evade the immune system and *fight* off current vaccines. (21-04-24 NZ)

Sentence (23) is therefore classified as *other* because it portrays the virus as fighting.

3.6.3 Conceptual metaphors

When analysing *the spread of*, it was the immediate context preceding and following the phrase that was of interest to see whether it appeared in a metaphorical context or not. To do so, the MIP and modified features from MIPVU were followed to analyse the surrounding context of the phrase. The classifications are based on Lakoff and Johnson's (1980) and Kövecses' (2010, 2015) work. The conceptual metaphors that appeared through the analysis are explained in the following section.

Structural metaphors

WAR is a conceptual metaphor that includes lexical metaphors that contain physically confrontational verbs and expressions such as *combat, fight, struggle, impact, counter, ramp up defences against,* and *to guard against*. It could have been possible to have named this conceptual metaphor PHYSICAL CONFRONTATION rather than WAR, since some of the expressions do not necessary allude to war directly. Calling the conceptual metaphor for PHYSICAL CONTFRONTATION as well, allows for more linguistic metaphors to fit within the frame (Semino, Demjén, & Demmen 2016: 634). However, since most metaphor research

concerning the Coronavirus pandemic has applied the term WAR (e.g., Semino 2021), this thesis will do the same.

FIRE is a conceptual metaphor that contains lexical metaphors such as *to fuel*, *to stamp out*, and other expressions that relate to fire. This type of conceptual metaphor occurred only twice in the dataset for *the spread of.*

WATER is a conceptual metaphor that includes lexical metaphors such as *to stem*, *surge*, and *subside*, which are words that are related to tides, streams, and other water-related expressions. Previous work has pooled the WATER conceptual metaphors with TSUNAMI (Wicke & Bolognesi 2020). However, as the words that appeared in the data suited more general water terms and did not necessary relate to a tsunami, the term WATER is used in this thesis. The WATER categorisation is also in line with Taylor and Kidgell's work on metaphor framings with flu-like pandemics (2021: 8).

OTHER is a group of conceptual metaphors that only occurred once in the data of *the spread of.* It would therefore have taken up too much space to fit them into separate conceptual metaphors. The conceptual metaphors that appear only once are THE SPREAD OF THE VIRUS IS AN ACT, THE SPREAD OF THE VIRUS IS MONEY, and THE SPREAD OF THE VIRUS IS A LIVING CREATURE, which are structural metaphors similar to WATER, WAR, FIRE, and OBJECT.

Ontological metaphors

CONTAINER is a conceptual metaphor which includes lexical metaphors that refer to something being limited or contained in a restricted physical space. In this category, most of the expressions include the words *contain*, *curb*, and *restrict* in them.

OBJECT is a conceptual metaphor that contains lexical metaphors that refer to some unspecific items. Words that appear in this conceptual metaphor are, for example, *to blunt* and *break*. The words do not refer to a specific item, however, they describe properties that can happen to physical items.

Orientational metaphors

AN INCREASE IN VIRUS SPREAD IS UP, is a conceptual metaphor that includes words such as *high* and *up*. These types of metaphors are correlated with the spread of the virus in that the 'higher' the spread is, the more positive cases there are.

A DECREASE IN VIRUS SPREAD IS DOWN, is a conceptual metaphor that includes words and phrases such as *closing down, slow down,* and *keep to a minimal level*. These types of metaphors express a downward trend in positive cases.

3.6.4 Literal contexts

Not all the concordance lines frame *the spread of* metaphorically. In fact, more than half the data are literal framings. Some of the literal contexts are, *to stop the spread of, to slow the spread of, to prevent the spread of,* and *to reduce the spread of*. These were excluded from being used metaphorically based on their definitions in the OED. Though, there were instances when a word had a more basic meaning that contrasted with the usage in the data, which were not as easily classified. For example, the word *reduce* could be considered as being used in a metaphorical way as it is defined as "to bring or draw together; to contract" (*OED* 2022, accessed 17 March 2022,) that could arguably be considered as belonging to the CONTAINER metaphor. However, there is also another definition of *reduce*, "to bring down or diminish to a smaller number, amount, quantity, extent, etc." (*OED* 2022, accessed 17 March 2022), which can be interpreted to be a literal sense of the word in the context of the Coronavirus. According to the OED, both definitions were used from the 14th century. Since the literal sense of the word is traced just as far back as the metaphoric, the word is considered too idiosyncratic, which is why it is not considered a metaphor in this thesis.

4 RESULTS AND DISCUSSION

This chapter is divided into four sections. The frequency results from the different inflections of *fight* and the lemmas *combat* and *battle* in both April 2020 and April 2021 are presented in section 4.1. The frequency of occurrence of the words and metaphors are discussed in relation to factors such as the situation in the society. In section 4.2 an elaboration and discussion concerning the results of the different semantic contexts from the analysis of *fight, combat,* and *effort* where implications of usage, entailments, and inferences are discussed. The results of *the spread of* are presented and discussed in section 4.3. Lastly, there is a general discussion of all the findings in section 4.4. All sections include a presentation of the data, followed by an implications of usage section where relevant, and a discussion section.

4.1 *Fight, combat,* and *battle*

4.1.1 Frequency in the Coronavirus corpus

There is a clear drop in frequency of the occurrences of the inflections of *fight* and the lemmas *combat* and *battle* from April 2020 to April 2021. Table 4.1 presents the frequency for each period and each inflection of *fight* as presented in the Coronavirus corpus. As can be seen, it is the US that has the highest frequency overall, including the highest number of occurrences per million. GB has the second highest frequency, followed by NZ that has the lowest occurrence of the inflections of *fight* in both April 2020 and April 2021. *Fight* occurs more frequently than the other inflections, with *fights* occurring the least frequent in April 2020 and April 2021 for all three countries.

The general drop in occurrence from April 2020 to April 2021 applies to all three countries, however, the decrease is more severe for GB and NZ. In April 2020 in NZ, *fight* occurs 4.9 times per million words, which decreases to 1.4 times per million in April 2021. Similarly, GB has 15.8 occurrences of *fight* per million in April 2020, which decreases to 6.7 times per million in April 2021. Similar dramatic drops in frequency can be seen with the other inflections in NZ and GB. In the US, however, the frequency of *fight* per million only drops from 70.9 to 63.7 between April 2020 to April 2021, and the inflection *fighting* drops only from 26.8 to 25.7. For the inflections *fights* and *fought* there is an increase in the usage in the US.

Table 4.1 Frequency of the inflections of fight *in April 2020 and April 2021*

Word	Period	NZ		US		GB	
		Freq. (n)	Per mil	Freq. (n)	Per mil	Freq. (n)	Per mil
fight	April 2020	528	4.9	7566	70.9	1705	15.8
	April 2021	74	1.4	3266	63.7	342	6.7
fought	April 2020	39	0.4	550	5.1	139	1.3
	April 2021	7	0.1	392	7.6	36	0.7
fighting	April 2020	182	1.7	2893	26.8	721	6.7
	April 2021	37	0.7	1320	25.7	134	2.6
fights	April 2020	18	0.2	456	4.4	100	0.9
	April 2021	5	0.1	281	5.5	12	0.2

Note: The total number of the frequency might deviate from the actual results provided by the Coronavirus corpus. The total number of occurrences reported in the qualitative analysis might therefore be lower (cf. 3.1.3).

The results for the lemmas *combat* and *battle* also reflect a decrease in usage from April 2020 to April 2021, like the inflections of *fight.* The frequency number and the frequency per million from the Coronavirus corpus is presented in Table 4.2.

Table 4.2 Frequency of the lemmas combat *and* battle *in April 2020 and April 2021*

Word	Period	NZ		US		GB	
		Freq. (n)	Per mil	Freq. (n)	Per mil	Freq. (n)	Per mil
COMBAT	April 2020	167	1.6	2905	26.9	550	5.1
	April 2021	33	0.6	1215	23.7	120	2.3
BATTLE	April 2020	249	2.3	4578	42.4	1196	11.1
	April 2021	41	0.8	2177	42.4	283	5.5

Note: The total number of the frequency might deviate from the actual results provided by the Coronavirus corpus. The total number of occurrences reported in the qualitative analysis might therefore be lower (cf. 3.1.3).

Similar to *fight* and its inflections, it is NZ that has the lowest frequency and occurrences per million for the lemma *combat* in both April 2020 and April 2021, followed by GB. NZ and GB decrease the occurrence of the lemma *combat* from 1.6 to 0.6 per million words and 5.1 to 2.3 per million words, respectively, which is much more than the US, where the frequency per million only decreases from 26.9 to 23.7 words per million. Similar differences in frequency are seen with the lemma *battle*, as illustrated in table 4.2. The US, however, is the only country that has the same frequency per million of the lemma *battle* in both April 2020 and

April 2021. The frequency results therefore argue that the US has a general higher usage of the lemmas *fight* and *combat* compared to GB and NZ.

4.1.2 Frequency of the topic *Coronavirus pandemic*

The results of the frequency of occurrences of the topic *Coronavirus pandemic* also reflect a downward trend. Figure 4.1 illustrates the percentage of occurrence of the topic *Coronavirus pandemic* for the inflections of *fight* combined.[12] Figures 4.2 and 4.3 display the percentage of occurrence of the topic *Coronavirus pandemic* of the lemmas *combat* and *battle*, respectively. All the concordance lines that were classified as belonging to the topic of the *pandemic* were metaphorically framed as a war by the words.

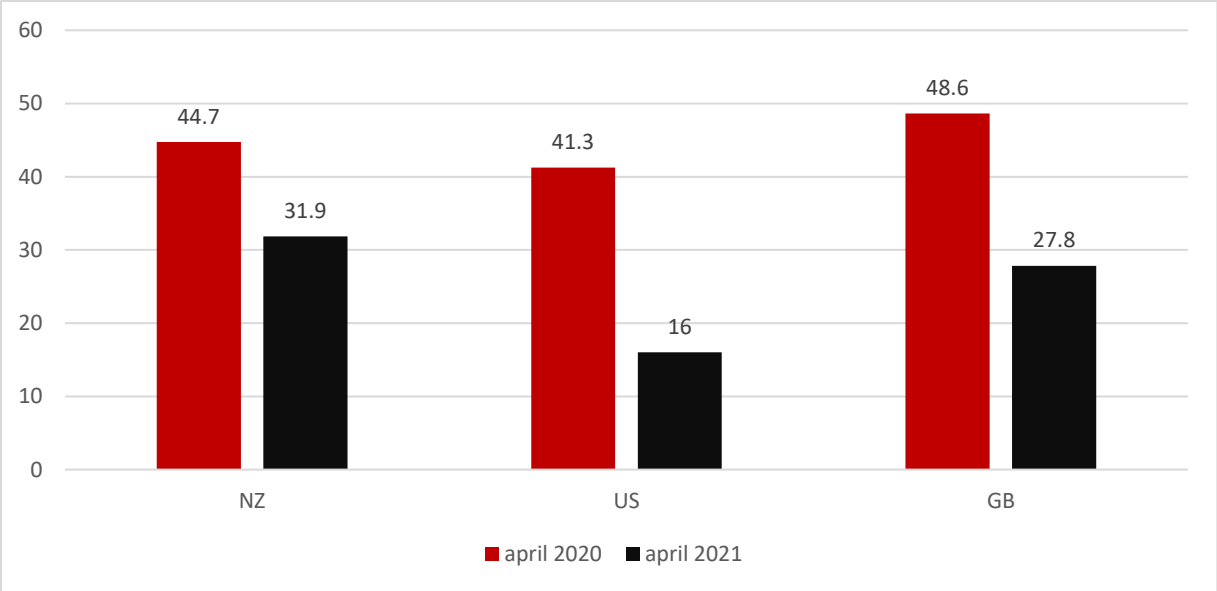


Figure 4.1 Occurrence of the Coronavirus pandemic *with all inflections of* fight* *in percent*
**Note: The results for all the inflections of* fight *are combined*

[12] The percentage was calculated after adding the results of all the inflections for each country together.

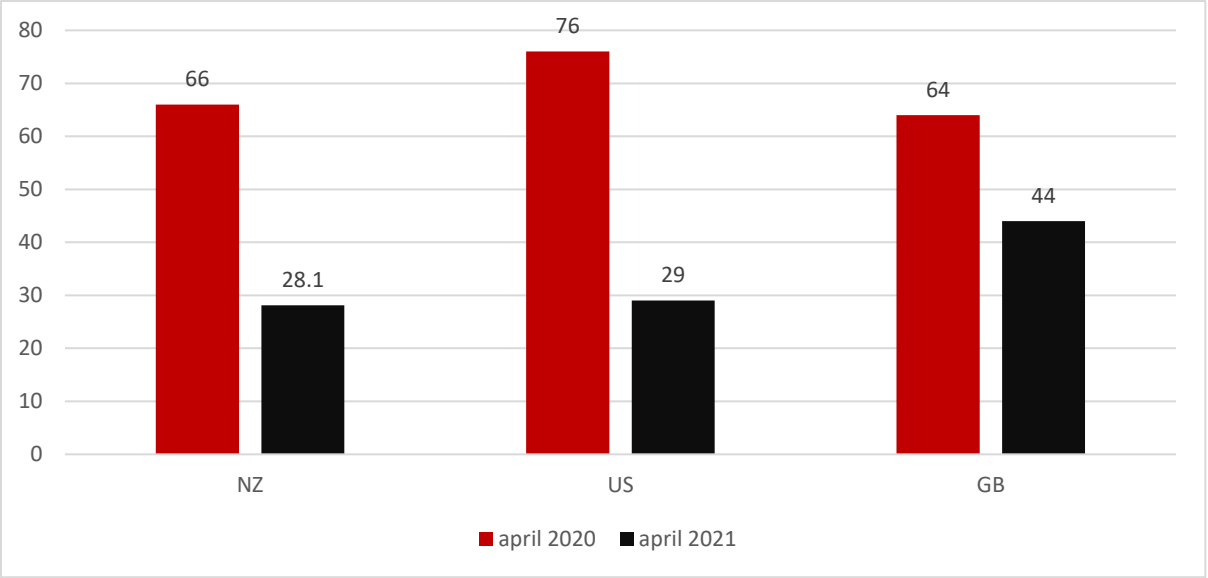


Figure 4.2 Occurrence of the Coronavirus pandemic *with the lemma* combat *in percent*

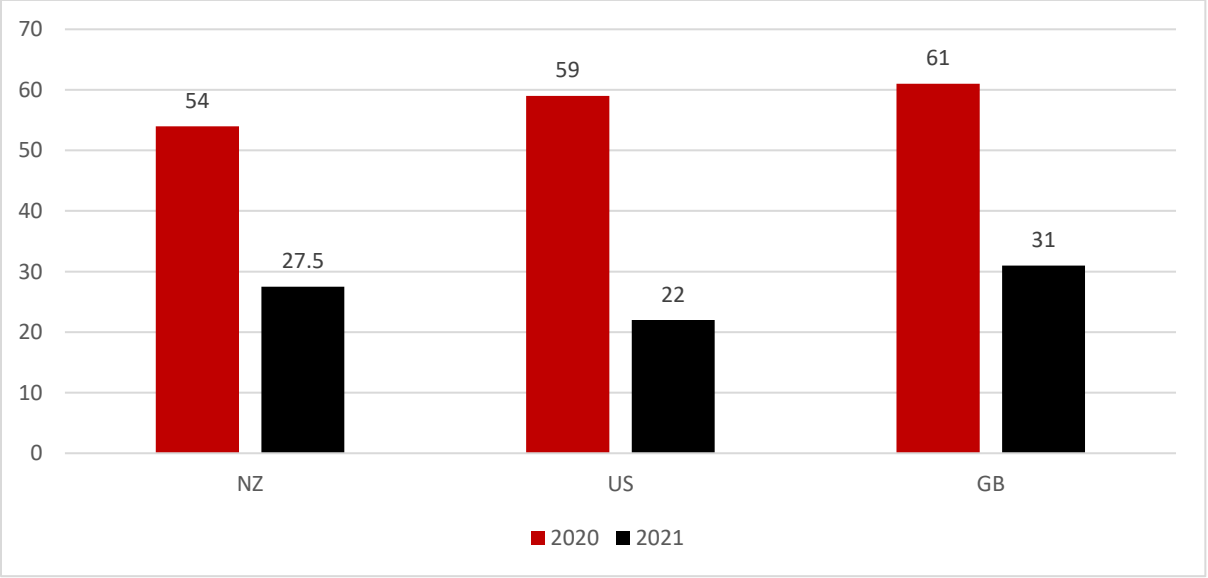


Figure 4.3 Occurrence of the Coronavirus pandemic *with the lemma* battle *in percent*

As illustrated by the figures, the US decreases the occurrence of the topic *Coronavirus pandemic* with 25.3% with the inflections of *fight*, 47% with the lemma *combat*, and 37% with the lemma *battle*. GB decreases the occurrence of the topic *Coronavirus pandemic* with 20.8% for the inflections of *fight*, 20% with the lemma *combat*, and 30% with the lemma *battle*. NZ decreases the occurrence of the topic *Coronavirus pandemic* with 12.8% for the inflections of *fight*, 37.9% for the lemma *combat*, and 26.5% with the lemma *battle*. There is then a general decrease in the frequency of the WAR framing of the topic *Coronavirus*

pandemic from April 2020 to April 2021 for all countries across all words. However, what is interesting to note is that it is the US that has the biggest drop in frequency of the topic overall. The results contrast with the frequency results found in the Coronavirus corpus (cf. 4.1 and 4.2). These findings argue that the occurrences of the words in the corpus do not correlate with the occurrence of the topic *Coronavirus pandemic* that is metaphorically framed as war.

Discussion

There are several factors that influence the usage of WAR metaphors and the frequency of them in discourse. First, the drop in frequency of the WAR metaphor can reflect a possible familiarisation and decrease of urgency with the Coronavirus pandemic, and hence, the framing and language change. As seen with previous metaphorical framings of flu-like pandemics (Taylor & Kidgell 2021) and AMR (Walker 2020), the WAR metaphors were higher at the beginning and (slowly) decreased over time. The same pattern is found with the Coronavirus pandemic.

During April 2020, the media across the world was focusing on the pandemic. Several countries were severely affected by the spread of the virus, and especially the US and GB had a high rate of daily positive cases (see appendix, figure 11 for a figure on confirmed new daily positive cases in the UK, US, and NZ), and peaks in daily Corona-related deaths (see appendix, figure 10). NZ experienced a peak in Corona-related deaths during April 2020, though the peak was relatively small compared to the other countries (see appendix, figure 10). However, the increase in deaths and positive cases correlate with the higher occurrence of the WAR metaphors. The correlation is reflected through the decrease in April 2021, which is in line with the decrease in positive cases for GB and NZ both prior to and during April 2021 and the decrease in positive cases in the US during April 2021.[13]

There was also a higher degree of urgency towards the situation in April 2020 as little was known about the spread of the virus and its symptoms. For example, the symptom of loss of taste and smell was first reported on 26 March 2020, and evidence that the antibody response to the virus lasts for several months was not uncovered before June/August 2020 (Carvalho, Krammer, & Iwasaki 2021: 264). Furthermore, especially in GB, there was certain

[13] There was a slight peak in positive cases at the beginning of April 2021 for the US, however, the peak occurred during a downward trend in positive cases which had its peak in January 2021.

vagueness about restrictions at the beginning of the pandemic, and rules and guidelines were in constant change even at the end of March 2020 (Nerlich & Jaspal 2021: 575). The vagueness slightly decreased during the beginning of April 2020 (ibid.: 578), however, it contributed to cause confusion and uncertainty. In April 2021, on the other hand, there was much more information about the virus, and the vaccines had been distributed to people since December 2020 (see *WHO* 2022, Carvalho, Krammer, & Iwasaki 2021: 264).

Other factors that might affect the frequency of the topic *Coronavirus pandemic* with the lemmas *fight, battle,* and *combat*, are the social and historical context. Wallis and Nerlich (2005: 2634) found that during the SARS pandemic in 2003, the most frequent metaphorical frames were KILLER and CONTROL, which are unlike the typical WAR framing of diseases as seen in cancer (Reisfield & Wilson 2004, Semino, Demjén & Demmen 2016, Semino et.al. 2017), HIV (Nie et.al. 2016), and other flu-like pandemics (Taylor & Kidgell 2021). The authors explain the lack of WAR metaphors during the SARS epidemic in the UK because of the Iraq war that raged during the same time. The Iraq war and the SARS epidemic rose a need for the media to create two distinctive discourse situations and to use different conceptual metaphors (Wallis & Nerlich 2005: 2637). However, it is important to point out that the lack of WAR metaphors did not occur all over the world, as they were used more frequently in for example China and Taiwan (ibid.: 2633).

Concerning the Coronavirus pandemic, in April 2021, the world had already been living with the virus for over a year, as compared to the unknown, threatening virus in April 2020. There had also been several world-wide covered sets of news, such as the US election, protesters breaking into the U.S. Capitol building, and the murder of George Floyd that rose the Black Lives Matters protests. All incidents caused a lot of attention in the news and on social media (*History* 2021), as well as initiating protests over the whole world where people ignored Corona restrictions like social distancing (e.g., Buchanan 2020, Singh 2020). These were happenings that might have drawn the attention away from the pandemic both during and prior to April 2021.

4.1.3 WAR metaphors and other topics

The *Coronavirus pandemic* is not the only topic that appears in April 2020 and April 2021 for the inflections of *fight* and the lemmas *combat* and *battle*. Other metaphorically framed topics like climate change, economy, personal struggles, and issues also frequently occur throughout the data. There are also a few instances of literal uses of the words that refer to war or

physical fights and sports. More interestingly to the discourse of the pandemic are topics that relate to other aspects of the Coronavirus pandemic or that indirectly relate to the pandemic that are also framed as a war. These topics are *misinformation* concerning the pandemic and the Coronavirus, economic and physical *aftereffects* of the pandemic and the virus, *vaccine scepticism* and hesitancy, and *PPE and measures*. Furthermore, *other diseases* such as AIDS, cancer, the common flu, and psychological illnesses are also framed in terms of war.

Misinformation refers to false information about the Coronavirus. Words such as *misinformation, false information, false claims*, concerning the Coronavirus pandemic belong to this topic.

(1) Ms Greenfield said emotional wellbeing was very important and *combating* the spread of fake news was a 'big issue'. (20-04-23 GB)
(2) …a new law that is claimed to *combat* 'false information' about the coronavirus pandemic… (20-04-05 NZ)

Sentences that frame the need to eradicate the fake news by combatting them, like in (1) and (2) are considered as *misinformation*. It draws attention to the fake news as being serious and urgent. What is further interesting with sentence (1) is that the fake news is framed as a disease/virus through "the spread of", however, this type of metaphorical framing falls beyond the scope of this thesis and will therefore not be addressed further.

Aftereffects refers to the impact the pandemic has had concerning economic issues, global effects, and physical and psychological effects of the virus itself.

(3) …The Salvation Army's Foodbank Project to help *combat* the devastating effects of COVID-19. (20-04-08 NZ)
(4) Wellington businesses will suspend rent payments for at least the next month as they *battle* the economic impacts of the coronavirus pandemic. (20-04-06 NZ)
(5) Then clinical psychologist Christine Runyan explains how to *combat* COVID-19 'brain fog'. (21-04-02 GB)

The aftereffects can be unspecified as in sentence (3) through using the word *effects.* Sentence (4) concerns the economic effects of the pandemic, and sentence (5) refers to the physical

complications after having contracted and recovered from the virus, which is why both sentences are considered as *aftereffects*.

Vaccine scepticism refers to the hesitancy concerning the vaccine and low vaccination rates. This topic does not occur before April 2021 since people did not start to get vaccinated before December 2020 (see appendix, figure 12).

(6) Health advocates go door-to-door to *fight* vaccine hesitancy. (21-04-23 US)
(7) This is intended to *combat* the low vaccination levels among care home workers in the UK… (21-04-26 GB)

Sentences like (6), that refers to the need to advocate against vaccine hesitancy, and sentences like (7), that refers to the action of increasing the low vaccination rates, belong to this topic.

PPE and measures refers to the equipment used in the 'fight' against the pandemic or the restrictive measures such as mask rules, and concerns issues or arguments relating to them.

(8) Douglas County and the Tri-County Health Department are back at their *fight* over COVID-19 health directives… (21-04-22 US)
(9) …the struggles of proper PPE and vaccinations are the new *battle* we face. (21-04-29 US)

Both sentence (8) and (9) concern arguments over the restrictions and health directives posed to try and stop the spread of the virus, which are prototypical of this topic.

Other diseases was also included as a separate category as it concerned diseases such as AIDS, AMR, cancer, the flu, and other future pandemics. The topic was not unsurprising to find, considering that diseases have been framed as a war for a long time (see Nie et.al. 2016). Despite that the topic *other diseases* does not refer to the Coronavirus pandemic, it refers to diseases in general and occurred relatively frequently in the data. The topic therefore provided some interesting findings of the usage of the WAR metaphor and is therefore considered in this thesis.

Table 4.3 illustrates all the 100 random concordance lines for the lemma *combat* in April 2020 and April 2021. The most common topic in April 2020 is the *Coronavirus pandemic* (shortened in the tables to *Coronavirus*), where the US has the most occurrences

(76%), followed by NZ (66%) and GB (64%). The second most frequent topic is *other metaphorical topics* (shortened to *other topics*) for GB (17%) and NZ (17%), however, for the US the *literal* topic (13%) is the second most frequent topic. Both GB (9%) and NZ (7%) have higher occurrences of *aftereffects*, compared to the US (2%), which is similar to the results for *other diseases*. *Misinformation* is a relatively rare topic in April 2020, where it occurs most in GB (3%) and most infrequent in the US (1%) and NZ (1%).

Table 4.3 Topics occurring with the lemma combat *in percentage*

COMBAT	NZ 2020	NZ 2021	US 2020	US 2021	GB 2020	GB 2021
Coronavirus	66	28.1	76	29	64	44
Literal	3	3.1	13	13	2	6
Other diseases	6	3.1	2	9	5	13
Aftereffects	7	9.4	2	0	9	6
Misinformation	1	25	1	1	3	2
Other topics	17	25	6	44	17	28
Vaccine hesitancy	0	6.3	0	4	0	1

The April 2021 results, however, differ from the results in April 2020. The *Coronavirus pandemic* occurs less frequently in all countries in April 2021, where it is most frequent in GB (44%) compared to the US (29%) and NZ (28.1%). It is also interesting to note the higher occurrence of *other topics*, which is the most frequent context in the US (44%), and a frequent topic in GB (28%) and NZ (25%). In April 2021, the topic *vaccine hesitancy* also occurs. Even though it is a relatively infrequent topic, finding occurrences of the topic being framed in a militaristic way is an interesting finding. *Vaccine hesitancy* is used most in NZ (6.3%), followed by the US (4%) and GB (1%).

Table 4.4 illustrates all the random concordance lines for the inflections of *fight* combined, i.e., the lemma *fight* in April 2020 and April 2021. Similar to the lemma *combat*, it is the topic *Coronavirus pandemic* that is the most frequent in April 2020, where GB has the most occurrences (48.6%), followed by NZ (44.7%) and the US (41.3%). Concerning *other topics*, it is NZ that has the most occurrences (34.2%), followed by the US (27.5%) and GB (21.6%). The frequency of *other diseases* is about the same for the countries, as with the lemma *combat*. However, with the lemma *fight* there are instances of the topic *PPE and measures*, which is a topic that does not occur in the data of *combat*. *PPE and measures* appears in April 2020 with most occurrences in NZ (1.2%), followed by the US (1%) and GB

(0%). Compared to the lemma *combat,* the other contexts like *misinformation* and *aftereffects* appear more rarely as well.

Table 4.4 Topics occurring with all the inflections of fight* *in percentage*

FIGHT*	NZ 2020	NZ 2021	US 2020	US 2021	GB 2020	GB 2021
Coronavirus	44.7	31.9	41.3	16	48.6	27.8
Literal	16	17.7	23.8	23.3	22.1	12.9
Other diseases	3.5	4.4	6.3	6	5.3	6.9
Aftereffects	0.4	0	0	0.8	2.3	2.4
Misinformation	0	0	0.3	0.8	0.3	0.4
PPE and measures	1.2	0	1	1.8	0	1.6
Other topics	34.2	46	27.5	50.8	21.6	48
Vaccine hesitancy	0	0	0	0.8	0	0

**Note: The results for all the inflections of* fight *are combined*

In April 2021, the inflections of *fight* provide a different picture of the usage of the WAR metaphor. Like with the lemma *combat* in April 2021, it is not the *Coronavirus pandemic* that is the most frequent topic. On the contrary, it is *other topics* that is most frequent in the US (50.8%), followed by GB (48%) and NZ (46%). The US has the highest occurrence of the *literal* topic (23.3%), which is because of their frequent mentioning of martial art sports and other combat related sports. The occurrence of *other diseases* increases for GB (6.9%) and NZ (4.4%), while it decreases for the US (6%). There are also a few occurrences of *PPE and methods* in April 2021, however, it still appears rarely similar to *misinformation* and *aftereffects*. Unlike the lemma *combat* in April 2021, *vaccine hesitancy* only appears in the US data (0.8%).

The results for the lemma *battle* are presented in table 4.5. Following the same pattern as with *fight* and *combat,* the *Coronavirus pandemic* is the most frequent topic in April 2020 where GB (61%) has the highest occurrence, followed by the US (59%) and NZ (54%). The occurrences of the topic *literal* in April 2020 are generally low. *Aftereffect, misinformation,* and *PPE and measures* are also quite infrequent in April 2020.

Table 4.5 Topics occurring with the lemma battle *in percentage*

BATTLE	NZ 2020	NZ 2021	US 2020	US 2021	GB 2020	GB 2021
Coronavirus	54	27.5	59	22	61	31
Literal	7	2.5	6	13	8	19
Other diseases	6	7.5	6	8	4	10
Aftereffects	2	0	1	3	2	0
Misinformation	0	0	0	0	1	0
PPE and measures	2	5	0	3	0	2
Other topics	29	57.5	28	50	24	38
Vaccine hesitancy	0	0	0	1	0	0

In April 2021, there is a decrease in the occurrence of the *Coronavirus pandemic* where GB (31%) has the most occurrences, followed by NZ (27.5%) and the US (22%). The other metaphorical topics related to the Coronavirus pandemic increase from April 2020, however, they appear relatively infrequent compared to the lemmas *fight* and *combat. Vaccine hesitancy* for example, only occurs once in the US in April 2021 (1%).

Grammatical patterns

What is interesting to note, is that there are differences between the lexical units that are used with the literal compared to the figurative contexts. Generally, there is a higher occurrence of nouns in the literal usage of the words compared to the figurative usage of the words. The appendix contains an overview of the distribution of nouns and verbs for the lemma *combat* (table 2), *battle* (table 3), and the inflections of *fight, fighting,* and *fights* (table 4). The tables clearly argue that there are more occurrences of verbs with the metaphoric usage of the words.

Concerning the lemma *combat,* the word rarely occurs as a noun as it mostly occurs as a verb. However, when it does occur, it typically appears in the *literal* topic in a noun phrase where it functions as a modifier e.g., *combat system, combat role,* and *combat gear.* The lemma *battle,* however, appears rarely as a modifier in a noun phrase, though there are a few occurrences that refer to specific battles like *Battle of Britain* and *Battle of Culloden.* Furthermore, with the lemma *battle,* there are a few instances such as *battle plan* that refer to the pandemic.

With the inflections of *fight,* there are differences between the inflections. For example, in GB, amongst the 41% of the concordance lines of *fights* in April 2020 are used literally to refer to a physical fight, either relating to sports or other types of fights where

physical violence is performed. Among the *literal* topic, 95.1% has *fights* occurring as a noun (see appendix, table 4). Similar patterns are found in the NZ and US data for *fights*. There is also a higher percentage of nouns occurring with the *literal* topic with the inflection *fighting*. For example, in NZ in April 2020, 53.8% of the *literal* topic that occurs with *fighting* are nouns, as compared to only 11.5% occurrences of nouns in metaphoric contexts. When *fighting* occurs as a noun in the topic of the *Coronavirus pandemic*, it functions as a modifier in a noun phrase, e.g., *fighting chance* and *fighting fund*. With the lemma *fight*, there is an even distribution of nouns and verbs in the literal context as well as the metaphoric topics for all countries. Generally, with the metaphorical topics, *fights* and *fighting* occur as verbs.

Discussion

The overall results for the topics used with the lemmas *combat* and *battle* and the inflections of *fight*, reflect that it is not only the Coronavirus pandemic that is talked of in terms of war. In fact, a wide range of topics are metaphorically framed as war during April 2020 and even more so during April 2021, which could have implications of the perceived threat of the pandemic.

For example, the topic *other diseases* is present throughout the data, and even though the percentage of occurrence varies between countries and between April 2020 and April 2021, the WAR framing of other diseases could frame the Coronavirus pandemic as less urgent. Furthermore, the topics *misinformation, aftereffects*, and *vaccine hesitancy* reflect that there are other wars both during and after the pandemic that need to be fought, which could draw the attention away from the war against the virus. The immediate threat of these topics is also much less severe than the Coronavirus pandemic. Especially in the beginning of the pandemic there was a lack of information (cf. 4.1.2) of the transmission of the virus as well as the symptoms and the severity of it. The 'war' against vaccine hesitancy, PPE and measures, and especially aftereffects appear less pressing than the pandemic itself. There are several of these topics that also do not share structural correlations with war.

As discussed throughout section 2.4, it could be argued that there is a structural correspondence with war and the *Coronavirus pandemic*. There are, however, less such structural correspondence between *misinformation*, *vaccine hesitancy, PPE and measures,* and *aftereffects*. For example, *aftereffects* are situations or states that have been caused by the Coronavirus pandemic, i.e., there is no enemy one has to defeat. *Vaccine hesitancy* as well, concerns what people believe and attitudes towards the vaccine, and does not include a clear

enemy. The WAR framing of *vaccine scepticism* can then instead of creating unity, create a distinct us vs. them, or the vaccinated vs. the unvaccinated. This type of framing can cause blame and division in the community, which did happen concerning the restrictive measures where newspapers shamed people for not following the restrictive measures (Nerlich & Jaspal 2021: 575–6).

The usage of the WAR metaphors overall reflects that it is, as suggested by Flusberg, Matlock, and Thibodeau's (2018: 11) guidelines, careless. Especially considering that the desired effect of using the WAR metaphor is to draw attention towards an urgent situation or threat (Flusberg, Matlock, & Thibodeau 2018: 4), framing other topics that do not directly relate to the immediate threat, i.e., the Coronavirus itself, as a war, appears to work against its purpose.

4.2 Semantic contexts

The semantic contexts that are used with the inflections of *fight* and the lemmas *combat* and *battle*, reveal how the WAR metaphor has been used to frame the Coronavirus pandemic. The data is presented in tables. For illustrative purposes, figures of the distribution of the semantic categories for the inflections of *fight* combined, and the lemmas *combat* and *battle* for both April 2020 and April 2021 can be found in the appendix, figures 13, 14, and 15, respectively.

Fight, fighting, fights and fought

In this next section, the results of the occurrences of the contexts for the inflections of *fight* are presented. First, tables 4.6 and 4.7 illustrate the distribution of the semantic categories for all the inflections of *fight* combined as it is easier to discuss the general usage of the words through the lemma *fight*. The total percentage is calculated based on the distribution of the semantic categories from the total occurrence of the concordance lines that were classified as belonging to the topic of the *Coronavirus pandemic*.

Table 4.6 Contexts that appear with all the inflections of fight* *combined in April 2020*

FIGHT* APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	7	6.1	35	21.2	58	29.9
EFFORT	26	22.6	33	20	46	23.7
METHOD	5	4.3	10	6.1	5	2.6
RESOURCE	23	20	33	20	39	20.1
RESTRICTION	8	7	11	6.7	8	4.1
SITUATION	29	25.2	43	26.1	30	15.5
UNITY	16	13.9	0	0	8	4.1
OTHER	1	0.9	0	0	0	0
TOTAL	115	100	165	100	194	100

**Note: The results for all the inflections of* fight *are combined*

Table 4.7 Contexts that appear with all the inflections of fight* *combined in April 2021*

FIGHT* APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	2	5.6	13	20.3	11	15.9
EFFORT	4	11.1	11	17.2	11	15.9
METHOD	3	8.3	6	9.4	3	4.3
RESOURCE	5	13.9	13	20.3	16	23.2
RESTRICTION	5	13.9	1	1.6	2	2.9
SITUATION	9	25.0	18	28.1	12	17.4
UNITY	7	19.4	2	3.1	14	20.3
OTHER	1	2.8	0	0	0	0
TOTAL	36	100	64	100	69	100

**Note: The results for all the inflections of* fight *are combined*

As seen in table 4.6, the lemma *fight* is most frequently used in the context of *resource*, *situation*, and *effort* for all three countries in April 2020. The context *body* is also frequent in the US and GB. In April 2021, as seen in table 4.7, the most frequent contexts are still *resource*, *situation*, and *effort* for all the countries, as well as *body* for the US and GB. It is interesting to note that there is an increase in the occurrence of the context *method* for all countries, as well as an increase in the context *resource* in NZ. The results for the different inflections, however, reflect more nuanced findings.

The results for the inflection *fight* in April 2020 are presented are presented in table 4.8, and the results for the inflection *fight* in April 2021 are presented in table 4.9. In April 2020, the most frequent contexts are *situation* and *effort*, which occur in all the countries with more or less the same frequency. It is interesting to note the difference in the context *unity*.

NZ has the highest occurrence of *unity* (16.1%), followed by GB (2.9%) and the US (0%). There are furthermore differences with the context *body* as it appears more frequently in GB (11.6%) as compared to the US (9.1%) and NZ (3.2%).

Table 4.8 Contexts that appear with the inflection fight *in April 2020*

FIGHT APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	2	3.2	6	9.1	8	11.6
EFFORT	14	22.6	14	21.2	16	23.2
METHOD	3	4.8	4	6.1	1	1.4
RESOURCE	14	22.6	19	28.8	25	36.2
RESTRICTION	7	11.3	8	12.1	3	4.3
SITUATION	12	19.4	15	22.7	14	20.3
UNITY	10	16.1	0	0	2	2.9
TOTAL	62	100	66	100	69	100

Table 4.9 Contexts that appear with the inflection fight *in April 2021*

FIGHT APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	2	6.5	3	12	5	11.4
EFFORT	3	9.7	4	16	7	15.9
METHOD	1	3.2	2	8	3	6.8
RESOURCE	5	16.1	6	24	14	31.8
RESTRICTION	5	16.1	1	4	1	2.3
SITUATION	7	22.6	8	32	5	11.4
UNITY	7	22.6	1	4	9	20.5
OTHER	1	3.2	0	0	0	0
TOTAL	31	100	25	100	44	100

In April 2021 in NZ, *fight* only occurs a total of 71 times[14]. The overall percentage of the concordance lines with the topic of the *Coronavirus pandemic* is therefore calculated based on the numbers from the results. In contrast to April 2020, where the countries share a more similar distribution of the most common contexts, there are more differences in April 2021. In NZ, the most frequent contexts are *unity* (22.6%) and *situation* (22.6%), followed by *resource*

[14] The number deviates from the frequency results in the corpus, which states that *fight* occurs 74 times (see table 4.1). This is due to the factors mentioned in 3.1.3.

(16.1%) and *restriction* (16.1%). There is also one occurrence of the context *other* (3.2%). In GB, the categories are more evenly distributed, where the context *resource* is the most frequent (31.8%), followed by *unity* (20.5%), *effort* (15.9%), and *situation* (11.4%), and *body* (11.4%). The most frequent context in the US is *situation* (32%), followed by *resource* (24%) and *effort* (16%).

Concerning *fights, fighting,* and *fought,* the results from April 2021 vary to such a decree that describing them in the text is sufficient. NZ and GB do, for example, not have any metaphorical occurrences of *fought* in the topic of the *Coronavirus pandemic* in April 2021, while the US only has eight. The relevant, though infrequent, results will therefore not be placed in tables in the text but can be found in the appendix. Table 4.10 presents the semantic categories that appear with *fighting* in April 2020.

Table 4.10 Contexts that appear with the inflection fighting *in April 2020*

FIGHTING APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	3	6.5	10	19.6	15	22.7
EFFORT	12	26.1	16	31.4	23	34.8
METHOD	2	4.3	3	5.9	2	3
RESOURCE	8	17.4	11	21.6	12	18.2
RESTRICTION	0	0	1	2	5	7.6
SITUATION	16	34.8	10	19.6	7	10.6
UNITY	5	10.9	0	0	2	3
TOTAL	46	100	51	100	66	100

The most common contexts for *fighting* in April 2020 vary greatly between the countries. *Unity* occurs frequently in NZ (10.9%), followed by GB (3%) and the US (0%). *Body* occurs most frequently in GB (22.7%), followed by the US (19.6%) and NZ (6.5%). *Situation* occurs most frequently in NZ (34.8%), followed by the US (19.6%) and GB (10.6%). The contexts *restriction* and *method* are quite infrequent for all countries. What is interesting to note is the higher occurrence of *effort* for all the countries.

In April 2021, the results vary more between the three countries (see appendix, table 5 for the results). In all, there are only 30 occurrences of *fighting* in the NZ data.[15] Five of the words are used in the topic of the *Coronavirus pandemic* (16.7%), which are distributed

[15] The number deviates from the number provided by the corpus.

across *effort* (20%), *method* (40%), and *situation* (40%). The US has 26 occurrences of metaphorically uses of *fighting* (26%) out of 100 concordance lines, all of which are distributed across the contexts *body* (26.9%), *effort* (23.1%), *method* (7.7%), *resource* (23.1%), and *situation* (19.2%). GB has 24 occurrences of the *Coronavirus pandemic* topic (24%) out of 100 concordance lines, which are distributed across *body* (25%), *effort* (16.7%), *resource* (8.3%), *situation* (29.2%), and *unity* (20.8%). The similar low frequency of *fights* can be seen in April 2021. The semantic contexts that appear with *fights* in April 2020 are presented in table 4.11.

Table 4.11 Contexts that appear with the inflection fights *in April 2020*

FIGHTS APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	0	0	2	9.5	10	35.7
EFFORT	0	0	1	4.8	4	14.3
METHOD	0	0	1	4.8	2	7.1
RESOURCE	1	20	3	14.3	2	7.1
RESTRICTION	1	20	2	9.5	0	0
SITUATION	1	20	12	57.1	6	21.4
UNITY	1	20	0	0	4	14.3
OTHER	1	20	0	0	0	0
TOTAL	5	100	21	100	28	100

Fights occurs only 18 times in NZ in April 2020 in the corpus (see table 4.1), five of which occur in the topic of the *Coronavirus pandemic*. GB has 99 occurrences of *fight,*[16] while the US has several occurrences of the inflection, so 100 concordance lines were extracted from April 2020 in the US. The contexts in NZ are evenly distributed between *resource*, *restriction*, *situation*, *unity*, and *other*. It is interesting to note the high occurrence of the context *body* in GB (35.7%), compared to the US (9.5%) and NZ (0%), and the high occurrence of *situation* in the US (57.1%) as compared to NZ (20%) and GB (21.4%).

In April 2021, the frequency follows the same downward trend as with *fight* and *fighting* (see appendix, table 6 for the results). In NZ there are only a total of five occurrences of *fights* in the corpus (see table 4.1), where none of which are used in the topic of the

[16] The number for *fights* in GB in April 2020 deviates from the number provided by the corpus, which states 100, not 99.

Coronavirus pandemic. In GB, there are only 12 occurrences of *fights,* where only one concordance line is used in the topic of the *Coronavirus pandemic*. *Fights,* in this case, appears in the context of *restriction*. In the US, 100 concordance lines were collected, however, the occurrences of the *Coronavirus pandemic* are infrequent. Only five out of 100 concordance lines (6%) describe the pandemic, four of which occur in the context of *situation* (80%) and one in *resource* (20%). The results for *fought* in April 2020 are presented in table 4.12.

Table 4.12 Contexts that appear with the inflection fought *in April 2020*

FOUGHT APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	2	100	17	63	25	80.6
EFFORT	0	0	2	7.4	3	9.7
METHOD	0	0	2	7.4	0	0
SITUATION	0	0	6	22.2	3	9.7
TOTAL	2	100	27	100	31	100

As illustrated, *fought* is used a total of 39 times in NZ in April 2020, two of which are used in the topic of the *Coronavirus pandemic* (5.1%). Both occurrences are used in the context of *body* (100%). There is also a high occurrence of the context *body* in GB (80.6%) and the US (63%). The context *situation* is low in GB (9.7%) and NZ (0%), while it is more frequent in the US (22.2%). The context *effort* also occurs in GB (9.7%) and the US (7.4%). The US is, furthermore, the only country that has occurrences of the context *method* (7.4%).

In April 2021, the frequency of *fought* decreases in line with the other inflections of *fight* (see appendix, table 7). There are seven occurrences of *fought* in NZ in April 2021 (see table 4.1), none of which could be classified as the topic of the *Coronavirus pandemic*. GB as well has 36 occurrences of the word, but none that appears in the topic of the *Coronavirus pandemic*. It is only in the US that a few concordance lines refer to the pandemic. Out of 100 concordance lines, eight refer to the pandemic, which are distributed across *body* (37.5%), *effort* (12.5), *method* (25%), *situation* (12.5%), and *unity* (12.5%). When looking closer at the semantic categories that appear through the analysis, they do not only differ from each country and each time period, but the results also differ with the results from the inflections of *fight.*

As mentioned in 4.1.3, the inflections of *fight*, *fights,* and *fighting* either occur as verbs or nouns. There are some contexts where nouns are more dominant than verbs and vice versa. The relevant contexts are mentioned in sections 4.4.1–4.4.8.

Combat

As illustrated in table 4.13, the lemma *combat* is most frequently used with the contexts *resource*, *restriction*, and *method* in April 2020. The US has the highest occurrence of *restriction* (40.8%), followed by NZ (25.8%) and GB (21.9%). The context *resource* is almost as frequent in all countries, however, here as well, GB has a slightly higher occurrence (26.6.%), followed by the US (23.7%) and NZ (22.7%).

Table 4.13 Contexts that appear with the lemma combat *in April 2020*

COMBAT APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	0	0	1	1.3	0	0
EFFORT	13	19.7	13	17.1	14	21.9
METHOD	12	18.2	6	7.9	12	18.8
RESOURCE	15	22.7	18	23.7	17	26.6
RESTRICTION	17	25.8	31	40.8	14	21.9
SITUATION	4	6.1	5	6.6	2	3.1
UNITY	5	7.6	2	2.6	5	7.8
TOTAL	66	100	76	100	64	100

Table 4.14 Contexts that appear with the lemma combat *in April 2021*

COMBAT APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
EFFORT	1	11.1	8	27.6	10	22.7
METHOD	4	44.4	2	6.9	2	4.5
RESOURCE	0	0	12	41.4	18	40.9
RESTRICTION	3	33.3	2	6.9	11	25
SITUATION	1	11.1	4	13.8	3	6.8
UNITY	0	0	1	3.4	0	0
TOTAL	9	100	29	100	44	100

As seen in table 4.14, the results from April 2021 reflect a drop in frequency from April 2020, which is in line with the general pattern. There is a decrease in the occurrence of *unity* for GB (0%) and NZ (0%), while it occurs once in the US data (3.4%). There are no occurrences of

the context *body* at all with the lemma *combat* in April 2021. The frequency for *restriction* in GB (25%) and NZ (33.3%) increases, while there is a decrease in the US (6.9%). The percentage of occurrence for the context *situation* increases for all countries, where the US has the highest occurrence (13.8%), followed by NZ (11.1%) and GB (6.8%). While there are no occurrences of the context *resource* in NZ in April 2021, there is an increase of the context in the US (41.4%) and GB (40.9%). It is important to point out that there is only a total of 32 occurrences of the lemma *combat* in NZ in April 2021 in the corpus (see table 4.2). The results are therefore calculated based on the total number of occurrences.

Throughout the whole data, *combat* typically occurs as a non-finite verb, though, there are a few concordance lines with the progressive aspect (*combating*) and the simple past (*combated*).

Battle

With the lemma *battle*, a slightly more different pattern of usage occurs. Table 4.15 displays the results for the lemma *battle* in April 2020. As can be seen, it is the contexts *situation*, *body*, and *effort* that are used most frequently. The context *situation* is used most frequently in NZ (63%), followed by GB (31.1%) and the US (23.7%). The context *body* occurs also with the lemma *battle*, most frequently in GB (29.5%) and the US (32.2%), followed by NZ (11.1%). The contexts *unity*, *method*, *resource*, and *restriction* occur relatively infrequent with the lemma *battle* compared to the other words.

Table 4.15 Contexts that appear with the lemma battle *in April 2020*

BATTLE APRIL 2020	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	6	11.1	19	32.2	18	29.5
EFFORT	6	11.1	16	27.1	13	21.3
METHOD	3	5.6	3	5.1	2	3.3
RESOURCE	2	3.7	3	5.1	8	13.1
RESTRICTION	2	3.7	2	3.4	1	1.6
SITUATION	34	63	14	23.7	19	31.1
UNITY	1	1.9	2	3.4	0	0
TOTAL	54	100	59	100	61	100

Table 4.16 Contexts that appear with the lemma battle *in April 2021*

BATTLE	**NZ 2021**		**US 2021**		**GB 2021**	
	n	%	n	%	n	%
BODY	0	0	4	18.2	5	16.1
EFFORT	2	18.2	4	18.2	8	25.8
METHOD	0	0	0	0	0	0
RESOURCE	1	9.1	3	13.6	4	12.9
RESTRICTION	0	0	1	4.5	0	0
SITUATION	8	72.7	10	45.5	13	41.9
UNITY	0	0	0	0	1	3.2
TOTAL	11	100	22	100	31	100

As seen in table 4.16, the results from April 2021 reflect that there is a slight shift in the distribution of the contexts. In April 2021, it is still the context *situation* that is the most frequent. In fact, all countries increase the occurrence of the context, where NZ (72.7%) still has the highest occurrence, followed by the US (45.5%) and GB (41.9%). The context *body*, however, decreases for all countries. The context *method* does not occur at all in April 2021, and there is only one instance of *restriction* in the US (4.5%), as well as one instance of *unity* in GB (3.2%). Overall, the lemma *battle* mostly occurs with the context *situation* and *effort* for all countries, as well as *body* for the US and GB in both April 2020 and April 2021.

4.2.1 Body

Looking at the results of the context *body* across the countries, time periods, and different inflections of *fight* and the lemmas *combat* and *battle*, clear patterns emerge. First, there is only one occurrence of *body* with the lemma *combat*, which is in the US in April 2020. The context otherwise only appears with the inflections of *fight* and the lemma *battle.* Second, there is a difference in frequency between the three countries. As illustrated in table 4.6, the overall occurrence of *body* across all inflections of *fight* in April 2020 is 29.9% in GB, 21.2% in the US, and 6.1% in NZ, which argues that there is a clear distinction between the countries. Likewise, with the lemma *battle* in April 2020, it is the US (32.2%) and GB (29.5%) that have the highest occurrence compared to NZ (11.1%) (table 4.15).

Comparing the April 2020 results with the results from April 2021, there is a shift in frequency and distribution of the *body* context. The frequency of occurrence is lower in April 2021 than in April 2020. The results furthermore reflect that it is the US that has the highest occurrence of *body* in April 2021 for both the inflections of *fight* (20.3%) (table 4.7) and the lemma *battle* (18.2%) (table 4.16). The US is also the only country that uses *fought* in April

2021 in the topic of the *Coronavirus pandemic*, where three of eight (37.5%) are used in the context of *body*. The occurrence of the context in GB in April 2021 is also lower than in April 2020. NZ still has the lowest occurrence of the *body* context throughout both periods and across all inflections.

Grammatical patterns

It is interesting to note that the context *body* most frequently occurs with the inflections *fought, fights,* and *fighting* in April 2020. The most frequent for all the countries is the inflection *fought*, where *body* occurs 100% in NZ, 63% in the US, and 80.6% in GB (table 4.12). *Fought* frequently occurs in the pattern *fought off* and appears in sentences in which a person has recovered from the virus. For example, in April 2020 in the US, 90%[17] of the concordance lines that clearly state recovery from the virus have the phrase *fought off* appear in them. In NZ and GB, 100% and 50% of statements with victory against the virus, respectively, contain *fought off.*

The *body* context is furthermore one of the contexts that are sensitive to word class with the inflections of *fight,* as the inflections occur more frequently as verbs than nouns. The inflection *fight* only occurs as a noun once in the GB data in April 2020, and twice in the US, once in April 2020 and once in April 2021. It otherwise occurs as a verb. This usage contrasts with the general distribution of nouns and verbs with the inflection *fight* with metaphorical topics (see appendix, table 4). The preference for verbs with the context *body* is further reflected through the high percentage of the *body* context with *fought*, which can only function as a verb. Similarly, every time *fights* and *fighting* occur in the context of *body*, they appear as verbs.

The preference for nouns over verbs is not found in the data with the lemma *battle.* However, there is a preference for when people succeed in 'defeating' the virus, *battle* typically occurs as a verb, while it occurs as a noun when the battle is lost. For example, in the GB data for the lemma *battle* in April 2020, out of a total of nine concordance lines where a person's encounter with the virus ended in defeat, 66.6% have *battle* occur as a noun. In the US in April 2020 out of a total of seven instances of the lemma *battle* that ended in death, 85.7% of the nodes occur as a noun. There are almost no sentences that indicate recovery from the virus with the lemma *battle.* The same preference for nouns when death is the

[17] There are ten concordance lines that state a recovery from the virus in which nine have the phrase *fought off* occur in it.

outcome of the encounter with the virus is seen with the inflection *fight.* There are, however, only a few concordance lines that clearly state death in which *fight* occurs as a noun.

There appears to be a preference for grammatical patterns for when the 'battle' against the virus is won as compared to when it is lost. The sentences frame a more active participation and highlighting of the WAR metaphor when victory is achieved as more verbs and expressions like *fought off* are used. The verbs insinuate a more active participation of an agent[18] and highlighting of the WAR metaphor than the noun does. Sentences such as "…Steven, had also died after a *battle* with the virus" (20-04-16 GB), are framed so that the active engagement in combat is not as directly expressed.

Implications of usage

Using *fight* in the context of *body*, i.e., the person's own physical struggle against the virus, is like metaphor use in general, not solemnly positive or negative. Previous findings from WAR metaphors used to describe personal struggles against diseases such as cancer, have shown that they can be employed in both empowering and disempowering ways (Semino et.al. 2017). Expressing a desire to "fight and win", or that a person has successfully "won the war against cancer" (Semino et.al. 2017: 63), for example, can be considered to have positive effects. The positive usages imply that the person has a wish to get better and wants to contribute to that 'fight'. Still, as discussed in section 2.4.2, WAR metaphors carry the entailments that if the person ends up 'losing' the battle, he/she might not have fought hard enough or put in enough effort compared to the ones that 'win'. In the cases such as cancer and being affected by the Coronavirus, people do not have any power or control over the outcome and course of the disease. Implying then that they do have some control over the situation can be damaging. This type of WAR framing of cancer has been shown to create and increase the perception of anxiety, fear, and self-blame amongst those where treatment fail (Semino et.al. 2017: 63, Hendricks et.al. 2018: 276). In the case of the Coronavirus, the WAR framing is also used in empowering and disempowering ways.

(10) …his mum Nini, who also *fought* off the deadly virus… (20-04-12 GB)

(11) …Sue Mitcher lost her two-week *battle* with coronavirus on Wednesday. (20-04-14 GB)

[18] The agent of a sentence is a participant that is conscious and initiates an action with volition (Payne 2011: 136).

(12) Here's how antibodies could lead to a treatment for those *fighting* coronavirus. (20-04-28 US)

Sentence (10) is an example of a positive connotation as the person recovers from the virus. Sentence (11), on the other hand, has a negative connotation, where the noun *fight* is used to address the 'defeat' of the virus. The majority of the sentences, however, are neutral like (12), i.e., the sentence does not indicate whether the outcome of the 'fight' leads to recovery or death. Arguably, however, the sentences carry each other's entailments which is contributing to the overall damaging mindset about the disease – that one does to some degree have control over the outcome and the body's function to recover from the disease. As Cipolletta and Ortu (2021: 283) write in their paper on the implications of WAR metaphors concerning the Coronavirus pandemic, "dying is seen as a defeat, evidence of a lack of fighting spirit and strength". Similar claims have also been made about other diseases such as cancer (Reisfield & Wilson 2004: 4025), where 'winning' is only a matter of fighting hard enough. Also, Wallis and Nerlich (2005: 2635) found that during the SARS pandemic (which was a pandemic caused by a respiratory disease similar to COVID-19), patients were metaphorically framed to have some control over the disease through POSSESSION such as *contracting, carry, pick up,* and *get* the disease. The POSSESSION metaphor frames the humans as the active agents and participants with their disease, which can cause feelings of blame. The lemmas *fight* and *battle* could be argued to fit into this category, as the words express control of the situation. Furthermore, the WAR framing could also be argued to damage the patients as they are reduced to 'foot soldiers' or 'battlefields' where the healthcare workers are the 'heroes' that 'fight' (Shapiro 2018: 4). The WAR framing of the context *body* could therefore possibly fail to see the human behind the roles.

4.2.2 Unity

Like with the context *body*, there are differences between the occurrence of the context *unity* between the countries, time periods, and the inflections of *fight* and the lemmas *combat* and *battle*. In April 2020, NZ has a high percentage of the context overall for the inflections of *fight* (13.9%), followed by GB (4.1%) and the US with zero occurrences (table 4.6). It is, however, important to keep in mind that the NZ data is smaller than the data from GB and the US. The results from *fights* in April 2020, for example, show that *unity* in the NZ data constitutes 20% of the concepts, but it occurs only once (table 4.11). Compared to the GB

data, *unity* constitutes 14.3% of the concepts, but contains four occurrences of *unity* in the dataset. This indicates that the readers in GB will be exposed to the metaphorical use of *fights* in the context of *unity* more often than the NZ readers. In April 2021 across all inflections of *fight*, however, it is GB that has the highest occurrence of *unity* (20.3%), followed by NZ (19.4%) and the US (3.1%) (table 4.7).

Unity occurs relatively infrequent with the lemmas *battle* and *combat.* The context *unity* is used about equally as frequent in NZ (7.6%) and GB (7.8%) in April 2020 with the lemma *combat*, while the US still has the lowest frequency (2.6%) (table 4.13). In April 2021, on the other hand, there is only one occurrence of *unity* in the US data, which accounts for 3.4% of all the contexts (table 4.14). *Unity* occurs also infrequently with the lemma *battle,* with only one instance in NZ in April 2020 (1.9%), two instances in GB (3.4%), and zero occurrences in the US (table 4.15). In April 2021 there is only one occurrence of *unity* which is in the GB data (3.2%) (table 4.16).

Grammatical patterns

Overall, there does not seem to be a preference towards *fight, fighting* or *fights* being used as a verb or noun in the context of *unity.* Still, there are some differences across the time-periods and different inflections that are worth mentioning. With *fight* in April 2020, there is an even distribution of nouns and verbs with *unity* for all countries. *Fighting* and *fights* occur only as verbs because of the general high occurrence of verbs with these inflections. In April 2021, there is a slight shift in *fight* as it is mainly used as a noun. In GB, out of the nine instances of the context, only two are used as verbs. Similarly, all of NZ's instances of *unity* in April 2021 have *fight* occur as a noun. The one occurrence of the context in the US data is also a noun. The results, however, are too few to determine whether the preference is part of the trend towards nouns or not.

Interestingly, *fought* in April 2020 has no occurrences of *unity* in any of the countries. Although, the US has one occurrence of *unity* with *fought* April 2021, which is a statement on the collective effort to overcome the virus. It falls natural that the context *unity* does not occur as frequently with the past tense *fought* as compared to the present tense and progressive aspects, since solidarity and cooperation are highlighted as necessities at the time of the utterance.

Implications of usage

The context *unity* can be considered a positive usage of the WAR metaphor. The framing calls the whole community to arms and urges people to cooperate and contribute to the difficult 'battle' ahead. Furthermore, *unity* leaves personal differences aside, as it focuses on the common good.

(13) The song is an appeal to citizens to fight the *battle* against coronavirus together. (20-04-19 US)

(14) Every act of selflessness, no matter how small, helps in our *fight* against this virus… (20-04-16 GB)

Sentences like (13) and (14) allude to unity and solidarity through the words *together* and the personal pronoun *our*, respectively. Both sentences have positive connotations as it is an encouragement for people to 'fight' together.

There are, however, some possible problems with the usage of the WAR metaphors in the context of *unity*. First, words such as *we, us,* and *our country*, do not differentiate between age, gender, or social and cultural background. The words reduce all personal and social issues to minor problems as their entailments unite everyone on a single frontline against a single enemy. Doing so can raise expectations of self-sacrifice with no regards to minorities or vulnerable groups in the community (Chapman & Miller 2020: 1117). Furthermore, it has been suggested that WAR metaphors can have the opposite effect of creating unity and cooperation within a community. Sabucedo, Alzate, and Hur (2020: 619) write that the desire to perform actions that benefit others is usually strengthened when one knows the action will, in fact, benefit others. However, if anxiety and fear affect cognitive and emotional functions connected to the survivor instinct, more negative emotions are strengthened. The negative emotions could then lead to selfish and irrational behaviour. Sabucedo, Alzate, and Hur (2020: 619) use hoarding of food and health supplies as examples of irrational and selfish behaviour that might have been triggered by the negative feelings of the WAR metaphors. As mentioned in 2.4.2 as well, there are several studies that reflect a negative effect on the metaphors for cooperation, for example through the lack of willingness to partake in preventative cancer actions.

Still, it is important to remember that the usage of WAR metaphors is not clear-cut (cf. 2.4.2). Depending on the context, the outcome can either be positive or negative. It is

therefore important to consider the other results. In the case of NZ, the outcome seems to have been positive in the long term, especially with the spread of Covid-19 and the Corona-related deaths (see appendix, figures 10 and 11). Though, NZ did also experience a spike in consumer activity prior to their first lockdown (Hall et.al. 2021: 10). This was a problem many countries experienced, including the US and GB.

4.2.3 Resource

The context *resource* is used quite frequently in both April 2020 and April 2021 across the inflections of *fight* and the lemma *combat.* In April 2020, GB has a slightly higher occurrence of *resource* with the lemma *combat* (26.6%) compared to the US (23.7%) and NZ (22.7%) (table 4.13). In April 2021, on the other hand, there are bigger variances between the countries. With the inflections of *fight* combined, it is GB (23.2%) that has the highest occurrence, followed by the US (20.3%) and then NZ (13.9%) (table 4.7). For the lemma *combat*, it is only the US (41.4%) and GB (40.9%) that have occurrences of *resource* in April 2021 (table 4.14). The context *resource* does not occur that frequently with the lemma *battle*, however, there is an increase in the occurrence of the context from April 2020 to April 2021 for all countries.

Grammatical patterns

The inflections *fighting* and *fights* are mainly used as verbs, though there is one occurrence as a noun, which is *fighting* in GB in April 2020. There is a fairer distribution of nouns and verbs with the inflection *fight*. In GB in April 2020, *fight* occurs as a noun 13 times compared to 12 occurrences of verbs, and there are seven occurrences of nouns and 12 occurrences of verbs in the US in April 2020. NZ has a slightly higher occurrence of nouns in April 2020. In April 2021, *fight* occurs predominantly as a noun for all three countries. There is also no preference for nouns or verbs with the lemma *battle*, which argues that the context *resource* does not adhere to a particular grammatical pattern.

Implications of usage

The *resource* context expresses some need, desire for, lack of, or evaluation of resources in the form of money, knowledge, healthcare equipment, medicine, healthcare workers, that is, has, or is going to be contributed towards the Coronavirus pandemic. The connotations of the

sentences can therefore not be considered solemnly positive or negative.

(15) Countries including the UK are looking to contact tracing technologies in the *fight* against the coronavirus pandemic and a possible way to help end lockdown. (20-04-11 GB)

(16) The effectiveness of surgical masks in *combating* Covid-19, at least among the general public, is not well supported. (20-04-06 NZ)

(17) …We on't [won't] need insurance cover but basic equipment to *fight* Covid-19. [spelling mistake in the original] (20-04-15 GB)

Sentence (15) comments on the possible use of tracing technologies to be applied in the struggle against the pandemic, is considered as neutral. Also, sentences like (16), that questions the usefulness of surgical masks from preventing the virus from spreading, and (17), that is a statement on the need for equipment to 'fight' the pandemic, do not carry any direct negative or positive entailments. Sentences (15)–(17) are plain statements on the resources in the topic of the *pandemic*, however, there are other entailments of the sentences that could rouse negative feelings.

As discussed in section 2.4.2 and 2.4.3, WAR framing can be used to justify the use and contributions towards and measures taken in the 'war' (Gillis 2020, Chapman & Miller 2020, Cipolletta & Ortu 2021, Castro-Seixas 2021). Sentences such as (17) might therefore raise a higher level of urgency and need for said equipment. The possible desired effect of using the WAR frame in this context is then to draw the attention towards the enemy (the virus) and the resources that are needed to fight it. In the case of (17), what is needed is basic equipment and not insurance covers. As argued by Cipolletta and Ortu (2021: 283), people can be more willing to comply to extreme measures with the WAR metaphor, which can be transferred onto the willingness to provide resources.

The overall effect could arguably be considered as positive. In times during crisis, such as the Coronavirus pandemic, the need for resources and help in the form of healthcare workers are crucial. Rousing people to action and encouraging people to contribute to stopping the spread of the virus by donating money and providing equipment, might be necessary to achieve the best outcome of the situation.

4.2.4 Restriction

The context *restriction* does not occur as frequently as some of the other contexts with the lemmas *fight* and *battle* in April 2020 and April 2021, however, it is one of the more frequent contexts with the lemma *combat* in April 2020. *Restriction* mostly occurs with the inflection *fight*, as it does not occur as frequently with *fighting, fights,* and *fought* (see tables 4.8–4.12). In April 2020, the occurrence of *restriction* is about equal in the US (6.7%), GB (4.1%), and NZ (7%) for the lemmas of *fight* combined (table 4.6). With the lemma *combat* in April 2020, it is the US that has the most frequent occurrence (40.8%), followed by NZ (25.8%) and GB (21.9%) (table 4.13).

In April 2021 for the lemma *fight*, it is NZ that has the highest occurrence of *restriction* (13.9%), followed by GB (2.9%) and the US (1.6%) (table 4.7). The frequency is a bit different with the lemma *combat* in April 2021, where there are zero occurrences in NZ, where the US has the highest (41.4%) followed by GB (40.9%) (table 4.14). What is surprising is that there is a dramatic drop in the occurrence of *restriction* with the inflections of *fight* and the lemma *combat* in the US from April 2020 to April 2021, while GB and NZ increase their usage.

Grammatical patterns

The inflection *fight* mostly occurs as a verb, with over 60% of all the instances in all the three countries occurring as verbs. There is also generally a higher occurrence of *restriction* with the lemma *combat,* which mostly occurs as a verb. The context appears least frequently with the lemma *battle*, where there seems to be an even distribution between nouns and verbs, however, it is difficult to determine because of the few occurrences of the context. The verb with the lemmas *fight* and *combat* highlights the more active engagement in the 'fight', compared to the noun.

Implications of usage

The context *restriction* involves measures that in some way restrict the freedom and possibilities of people's everyday lives.

(18) New Zealand has put strict measures into place to *combat* coronavirus. (20-04-16 NZ)

(19) …the single most important action we can take in *fighting* coronavirus is to stay at home in order to save lives. (20-04-03 GB)

(20) Sweeping stay-at-home orders in 42 states to *combat* the new coronavirus have shuttered businesses… (20-04-15 US)

Restrictive measures can for example be expressed through sentences like (18), where the restrictions are justified by the need to 'combat' the virus. Encouragements to follow restrictions, like sentence (19) are also common. Sentence (19) is a statement on the stay-at-home order and the positive effects it has of saving lives. Furthermore, sentence (20) is an example of a statement on the effects the restrictions to prevent the spread of the virus can have. In (20), that effect has 'shuttered' businesses. All sentences use the words *combat* and *fighting* as a verb. By using a verb, as compared to a noun, a more active engagement in the struggle against the Coronavirus pandemic is highlighted. Sentences (18) and (19) are not implicitly positive or negative. Sentence (20), however, expresses a negative outcome of the stay-at-home orders that was implemented to try to stop the spread of the virus.

WAR metaphors have been argued to have the effect of highlighting the situation as urgent and serious (Flusberg, Matlock, & Thibodeau 2018, Cipolletta & Ortu 2021: 4, Castro-Seixas 2021: 4). Framing the need or presence of restrictive measures that limits peoples' every-day lives and possibilities in the form of WAR, applies the urgency from the WAR frame to justify the measures. The desired effect is then so that people will accept them more easily (Gillis 2020: 136, Cipolletta & Ortu 2021: 283, Castro-Seixas 2021: 4). This could arguably be positive. Castro-Seixas (2021: 1) writes that depending on the usage of the metaphors, their impact does not need to be damaging and negative. In fact, she argues that using the WAR metaphor in the time of the Coronavirus pandemic might be what was necessary for people to accept the measures. Gillis (2020: 153) also argues that it encourages people to accept severe intrusions on their lives and freedom, which has a positive outcome of saving people from the virus. This conclusion is also drawn by Charteris-Black (2021: 51) in his survey on the effects of WAR metaphors, where the participants were more likely to accept a complete quarantine when exposed to WAR metaphors as they alluded to the feelings of fear. However, as discussed in section 2.4.2, there are also studies that show a negative effect on the use of WAR metaphors, such as the war on drugs and poverty, which had a negative effect on minorities in the US (Chapman & Miller 2020: 1108) – not to mention that the war on preventative actions

towards cancer treatment has shown less willingness to partake in them (Landau, Arndt, & Cameron 2018, Hauser & Schwarz 2015, 2020).

Considering that in the beginning of the pandemic, there was little information about the ways the virus spread and symptoms (cf. 4.1.2), as well as the urgent need for measures and guidelines with the increasing daily positive cases and deaths around the world (see appendix, tables 10 and 11), the use of the WAR metaphor in the context of *restriction* is justified according to Flusberg, Matlock, and Thibodeau's guidelines (2018: 11).

4.2.5 Situation

Overall, the context *situation* is used most frequently in the US in both April 2020 and 2021, for both the combined usage of the inflections of *fight* and the lemmas *combat,* followed by NZ and GB (tables 4.6, 4.7, 4.13, 4.14). With the lemma *battle,* it is NZ that has the highest occurrence of *situation* in April 2020 (63%) followed by GB (31.1%) and the US (23.7%) (table 4.15). In April 2021, NZ still has the highest occurrence (72.7%), followed by the US (45.5%) and GB (41.9%) (table 4.16). *Situation* is the only context where there is an increase in the occurrence from April 2020 to April 2021 for all countries across all the data, though, there is a decrease of 0.2% with the context *situation* for the inflections of *fight* combined for NZ from April 2020 to April 2021.

The US has the highest occurrence of *situation* with all the inflections of *fight,* except for *fighting* (table 4.10). In April 2020, it is NZ that has the highest percentage and occurrence of *situation* for *fighting,* and in April 2021, it is GB that has the most occurrences of *fighting* in the contexts of *situation*. This difference leads to some interesting findings.

Grammatical patterns

There is a preference for *fight* to appear as a noun in the context of *situation*. In April 2020, 90.9%, 92.3%, and 92.9% of all concordance lines that belonged to *situation* have *fight* occur as a noun in NZ, the US, and GB, respectively. Likewise, in April 2021 that distribution is 100%, 100%, and 85.7% in NZ, the US, and GB, respectively. The same pattern is found with the lemma *battle*. Where 91.2%, 85.7%, and 71.4% of *battle* appears as a noun in NZ, the US, and GB, respectively, and 75%, 70% and 61.5%, respectively, in April 2021. The noun highlights more the situation surrounding the pandemic than the verb does. As mentioned in 4.1.3, the lemma *combat* predominantly occurs as a verb, which might be why *situation* appears relatively rarely with the lemma *combat* compared to the lemmas *fight* and *battle*. It is

then interesting that there is a high percentage of occurrence of *situation* with the inflection *fighting* in NZ in April 2020, which mostly occurs as a verb. The verb highlights more of the active participation of the pandemic than the noun does. In April 2021, it is GB that has the highest occurrence of *situation* with the inflection *fighting*. Arguably, the highlighting of the active participation of *situation* is more beneficial at the beginning of the pandemic compared to later, as according to Flusberg, Matlock, and Thibodeau's (2018: 11) guideline.

Implications of usage

The majority of the instances of the context are statements concerning the pandemic as a situation or state, or they situate the pandemic in time and describe other instances that might have happened at the same time of the pandemic. The connotations will therefore vary depending on the situation in which is explained.

(21) …to correct the enormous imbalances that exist in the world today in the *fight* against COVID-19. (21-04-22 NZ)

(22) While the world is preoccupied with *combating* COVID-19, the joint Israeli-US committee set up to implement the US administration's disastrous…(20-04-09 NZ)

(23) …with over 45 million COVID-19 vaccine doses administered so far, the *battle* is not yet over. (21-04-30 GB)

Comments on situations that exist parallel to the Coronavirus pandemic, as in sentence (21) that comments on the imbalances in the world, are not positive or negative comments towards the pandemic. Similarly, sentence (22) is a statement on an action that happens while the world handles the situation of the pandemic. The two sentences are therefore considered neutral when framing the Coronavirus pandemic. Still, there are sentences that are indirectly expressing negative effects or connotations of the pandemic. Sentence (23) is an example of a statement on the state of the pandemic, i.e., that it is not over.

Overall, the framing of the pandemic as a WAR could arguably have a negative impact. As discussed in section 2.4.2 and 2.4.3, while using the WAR metaphors to bring attention and urgency towards the pandemic can be positive at the very beginning. However, previous research has suggested that WAR framing can cause anxiety and negative feelings. Alluding to fear might be exhaustive for longer periods of time, which can then have a negative impact.

4.2.6 Method

The context *method* is one of the more infrequent contexts in the data. It is distributed about equally across the three countries concerning occurrence, both in April 2020 and 2021 for the inflections of *fight* combined (tables 4.6 and 4.7) and with the lemma *battle* in April 2020 (table 4.15). The distribution or percentage of occurrences, however, varies from each country. With the combined results for the inflections of *fight* in April 2020, it is the US that has the most occurrences of *method* (6.1%), followed by NZ (4.3%) and GB (2.6%) (table 4.6). The distribution between the countries in April 2021 is similar, only that the frequency of occurrence is higher for each country (table 4.7). The results for the lemma *combat,* on the other hand, show greater variance between the countries. It is GB that has the highest occurrence in April 2020 (18.8%), closely followed by NZ (18.2%) and finally the US (7.9%). In April 2021, it is NZ that has the highest frequency of the context (44.4%), followed by the US (6.9%) and GB (4.5%). Here it is important to remember the difference in data size. The percentage in NZ is higher because of the fewer concordance lines. With the lemma *battle* the context *method* only appears in April 2020, where NZ has the highest occurrence (5.6%), followed by the US (5.1%) and GB (3.3%) (table 4.15).

Grammatical patterns

Because the context *method* generally occurs more infrequently than other contexts, it is more difficult to make an assessment on the usage of verbs and nouns. However, there seems to be a general preference for verbs with the inflections of *fight*. It is only in the US data where *fight* in April 2020 has a 50/50 distribution of verbs and nouns for the context *method*, while there is only one occurrence of *fight* as a noun in GB April 2021. The context *method* otherwise has the inflections of *fight* and the lemma *combat* occurring as verbs. The verb here again indicates a more active participation than the noun. The lemma *battle* frequently occurs as a noun, where there are several concordance lines where the noun functions as a modifier as in *battle plan(s).*

Implications of usage

All the instances of the context *method* imply some sort of undefined or specified actions that do not restrict people in their everyday lives, but the actions contribute towards stopping or slowing the spread of the virus. Most of these contexts are neither positive nor negative.

(24) How a small business owner *fights* Coronavirus (20-04-12 US)

(25) Testing is just one public health measure needed to *combat* the spread of Covid-19… (20-04-29 NZ)

(26) …With this *battle* plan, we could gradually build up immunity. (20-04-02 NZ)

Undefined methods can for example be expressed as in sentence (24). The sentence is part of a headline that concerns the *method* in how a small business owner contributes to the 'fight'. Sentence (25) is also a statement as it comments on testing as being one method to stop or halt the spread of the Coronavirus. *Method* can also be expressed like in (26), that refers to a 'battle' plan. None of the sentences carry any specific negative or positive connotations, which is why this context is considered neutral. However, like *restriction* and *resource*, framing *method* as a war highlights the urgency of the situation and can therefore cause people to accept more easily the methods and plans posed to stop the spread of the virus.

4.2.7 Effort

The context *effort* is one of the more common contexts in the data. In April 2020, *effort* occurs almost as frequent in the US (20%), NZ (22.6%), and GB (23.7%) with the inflections of *fight* combined (table 4.6), which is about the same frequency of occurrence for the lemma *combat.* In April 2021, the inflections of *fight* are used in the context of *effort* in the US the most (17.2%), followed by GB (15.9%) and NZ (11.1%) (table 4.7). The distribution is about the same for the lemma *combat* in April 2020, where GB has the highest occurrence (21.9%), followed by NZ (19.7%) and the US (17.1%) (table 4.13). In April 2021, the US has the highest occurrence (27.6%) followed by GB (22.7%) and NZ (11.1%) (table 4.14). For the lemma *battle* in April 2020, it is the US that has the highest occurrence (27.1%), followed by GB (21.3%) and NZ (11.1%) (table 4.15). In April 2021, it is GB that has the highest occurrence (25.8%) followed by the US (18.2%) and NZ (18.2%) (table 4.16). Across the whole data, there is a general decrease in the frequency of occurrence of *effort*. However, there is an increase of the context in NZ with the lemma *battle,* and an increase in the context with the lemma *combat* for the US and GB from April 2020 to April 2021.

Grammatical patterns

The context *effort* does not adhere to a particular grammatical pattern. There is about an equal

occurrence of nouns and verbs with the inflection *fight* and the lemma *battle*, and the context is one of the more frequently occurring ones with the lemma *combat*.

Implications of usage

The context *effort* describes or infers the understanding that some effort or active participation towards the 'fight' against the pandemic is being, has been, or is going to be contributed.

(27) …federal, state and local governments attempt to *combat* the rapidly spreading disease. (20-04-11 NZ)

(28) Today they are *battling* a catastrophic crisis, and it's time we step in to protect them. (20-04-26 NZ)

(29) Other hotel companies have offered free rooms for doctors and nurses *fighting* the coronavirus pandemic… (20-04-03 US)

Effort can be expressed directly as in (27), where the effort being provided is highlighted through the word *attempt*. Direct encouragements to support those who are providing effort into stopping the crisis, like (28), are also common for the category *effort*. There are also more subtle statements of effort as in example (29), where the doctors and nurses' efforts towards the pandemic are expressed through the progressive verb *fighting*. The direct meaning of the sentences is therefore considered neutral, but the sentences' inferences and entailments can be negative. As discussed in section 2.4.3, providing effort to a fight can be seen as a necessary 'sacrifice' for the common good in a war. The negative complication arises when not all communities in a society, like people in vulnerable situations, can self-sacrifice to the same degree. Arguably, such entailments can lead to shaming those who do not adhere to the rules, which did happen in some newspapers (Nerlich & Jaspal 2021: 575).

Especially framing doctors and nurses as 'fighting' the virus as in (29), could potentially be negative and damaging. It has, for example, been argued that the WAR metaphor can portray healthcare workers as having more power and control over the situation (Shapiro 2018: 5). This has caused some healthcare workers to reject the WAR metaphor, by for example stating that "we're not soldiers, we're healthcare workers" (Olza et.al. 2021: 109). Furthermore, Gillis (2021: 154) writes that portraying healthcare workers as "soldiers side by side in battle", can draw the attention away from the actual impact of the pandemic.

4.2.8 Other

There are only two occurrences of the context *other* in the data. One occurs in NZ in April 2020 with the inflection *fights,* and the other occurs in NZ in April 2021 with the inflection *fight.* Both instances are verbs.

Implications of usage

The instances of *other* concerns phrases that frame the virus as being the agent that fights.

(30) …the virus can find mutations that allow it to completely evade the immune system and *fight* off current vaccines. (21-04-24 NZ)

(31) …the T cells fight the virus in the lungs and the virus *fights* back… (20-04-24 NZ)

The sentences portray the virus as fighting vaccines in (30) (this example is previously discussed in 2.6.2, as example (23)), and T cells in (31). Neither sentence carry a negative or positive connotation, which is why this context is considered as neutral. It is interesting that there are such few portrayals of the virus as an attacker. The virus is otherwise not personified or framed as an agent.

4.2.9 Discussion of semantic contexts

The most common categories overall for both the inflections of *fight* combined and the lemmas *combat* and *battle* are *situation* and *effort*. However, there are some contexts that are more frequent with certain lemmas than others. The context *body* occurs most frequently with the inflections of *fight* and the lemma *battle,* as there is only one instance of the context with the lemma *combat* in the whole dataset. The context *method* occurs more frequently with *combat* and *fight. Resource* and *restriction* generally occur more frequently with the lemma *combat,* and *resource* occurs more frequently with the inflections of *fight* and the lemma *combat.* Some of the differences in usage of the words can be explained by usage in general.

A comparison search[19] for the differences in frequency of collocates that appear after the lemmas *combat* and *fight* in the NOW corpus for the period 2018,[20] revealed that the lemma *combat* occurs more frequently with nouns such as *sports, climate, terrorism, violence,*

[19] The comparison search in the NOW corpus allows for the frequency and ratio of the collocations of two words or phrases to be compared.

[20] The year 2018 was chosen because it was prior to the outbreak of the Coronavirus that started during the end of 2019.

trafficking, and *pollution.* The lemma *fight,* on the other hand, occurs more frequently with nouns such as *battle, rights, champion, cancer, life, fire,* and *way* (see appendix, figure 16 for the results of the comparison search between the lemmas *combat* and *fight* in the NOW corpus). A comparison search for the differences in frequency of the collocates that appear after the lemmas *fight* and *battle* in the NOW corpus during 2018 further revealed that *battle* occurs more frequently with nouns such as *cancer, royale, depression, blaze, game, addiction,* and *illness,* while *fight* occurs more frequently with *corruption, terrorism, war, battle, rights, champion* (see appendix, figure 17 for the results of the comparison search between the lemmas *battle* and *fight* in the NOW corpus). Arguably, the lemma *combat* occurs more with figurative topics as well as with more societal topics. The lemma *fight,* on the other hand, occurs more frequently with literal topis. More importantly, both the lemmas *fight* and *battle* occur more often with nouns such as *cancer, illness,* and *disease* (see appendix, figure 18 for the results of the comparison search between the lemmas *battle* and *combat* in the NOW corpus). This difference in usage explains the high occurrence of the *body* context with the inflections of *fight* and the lemma *battle,* and the higher occurrence of *restriction* for the lemma *combat.* Furthermore, since the lemma *battle* is the most oriented towards diseases, it explains the fewer occurrences of the contexts *restriction, resource, method,* and *unity.* The context *situation,* furthermore, occurs more frequently with the lemmas *battle* and *fight,* which might be because *combat* is more associated with topics that are not related to diseases.

For some of the differences concerning the usage of the WAR metaphor between the countries and time periods, societal factors, measures and methods posed to stop the spread of the virus, the status of the spread of the virus, as well as the number of casualties, can explain the differences.

With the context *body,* the differences between the countries and time periods need to be considered in the context of the numbers of Corona-related deaths and positive cases of the virus. GB experienced many daily positive cases of the virus throughout March 2020 (see appendix, figure 11), and even through the spread somewhat stagnated throughout April, there was a peak in deaths during April 2020 (see appendix, figure 10). Like GB, the US experienced a high peak in Corona-related deaths, which can explain the high occurrence of the *body* contexts during this period. NZ, on the other hand, had relatively low rates of positive cases and had only a handful of Corona-related deaths during April 2020, which correlates with the low occurrence of *body.* Another reason for the high occurrence of the *body* context in GB is because the Prime Minister (PM) Boris Johnson contracted the

Coronavirus by the end of March 2020 and spent the first two weeks of April 2020 in isolation and in hospital (Harding 2020). Some of the occurrences of the *body* context therefore refer to their PM's 'fight'.

In April 2021, the situation is quite different, as it is the US that has the highest occurrence of the context *body*. This is in line with the country's increasing Corona-related deaths during April 2021 (see appendix, figure 10). GB and NZ experienced a decrease in deaths both prior to and during April 2021, which is reflected through their lowered occurrence of the *body* context.

There also seems to be a correlation with *unity* and the success the countries have had with their restrictions. In the data, NZ has the highest occurrences of the context *unity*, which is reflected through their successful implementation and execution of the restrictions to stop the spread of the virus. Furthermore, GB has lower instances of *unity* in April 2020 as compared to April 2021, which is correlated with the country's more success of slowing the spread of the virus in April 2021 as compared to April 2020 (see appendix, figure 11). The US has the least occurrences of *unity*, which is correlated with their increase in positive cases in both April 2020, and slight peak in positive cases in April 2021.

Furthermore, the US reduces its occurrence of *restriction* from April 2020 to April 2021, which might be explained by the higher vaccination rates. The US had the highest percentage of fully vaccinated people throughout April 2021 (see appendix, figure 12). Their focus, compared to GB and NZ, might therefore have been on the vaccination and not the restrictions as the virus was not perceived as threatening and urgent as it did in April 2020. As the results illustrate, GB and NZ have higher occurrences of *restriction* in April 2021 than the US.

Implications of usage

The ratio and overall occurrence of the different contexts reflect that the WAR metaphor highlights several aspects of the pandemic. Not only is the WAR metaphor used to describe individual's confrontation with the virus, but it is also used to describe the need for restrictions, resources, effort, and unity. The urgency and state of the pandemic are also highlighted through framing the situation as a war, and the metaphor also alludes to the need to stand united and cooperate through the difficult and urgent situation. Despite there being several aspects of the pandemic that the WAR metaphors highlight, the WAR metaphors lack the progressive and long-term aspect (cf. 2.4.3). As reflected through the contexts that appear

in the WAR framing of the pandemic, there is no mentioning of the situation once the 'war' is over. There are of course, as shown in section 4.1.3, the topic *aftereffects* that can highlight the situation after the pandemic. Arguably however, the WAR framing of *aftereffects* only initiates a different war with a different enemy and is therefore not considered an extension of the WAR frame concerning the Coronavirus pandemic.

There are also negative entailments with the use of the WAR metaphor. The context *body* could be argued to cause negative feelings concerning people who have not recovered from the virus as the WAR framing portrays them as not fighting hard enough. The context *unity* could be argued to ignore the needs individuals have. However, to understand the whole picture of how the Coronavirus pandemic has been framed, it is important to look at what other conceptual metaphors are used. The next section investigates how frequent the WAR metaphors are compared to others, as well as analysing what the other metaphorical expressions appear and what aspects of the pandemic they highlight.

4.3 *The spread of*

The purpose behind searching *the spread of* in the corpus is to see the general use and distribution of metaphorical frames compared to the WAR frame. First, almost all the data was classified as the topic *Coronavirus pandemic* in both periods. In April 2020, 95%, 95%, and 91% of the data in NZ, the US, and GB was classified as the *Coronavirus pandemic*, respectively. In April 2021, out of NZ's 31 instances of *the spread of*, 25 (80.6%) appear in the topic of the *Coronavirus pandemic*, while the topic comprised 94% of the results in US and 92% in GB. The other topics for both periods are predominantly other illnesses and diseases such as std, foot and mouth disease, the flu, and germs, misinformation about the Coronavirus, socialism, propaganda, and housing. There is also one occurrence of an unclassifiable, partial concordance line that was placed in the other category. Compared to the inflections of *fight* and the lemmas *combat* and *battle,* there is a much higher occurrence of the topics *Coronavirus pandemic* and *other diseases*.

The OED defines the noun *spread* with *the* preceding and *of* following the noun as, "the fact or process of gradually reaching a wider area or more people, or of becoming prevalent or (more) widely existent, present, known, felt, etc." (*OED* 2022, accessed 17 March 2022). It is then not unexpected that the phrase *the spread of* would appear frequently in the topic of the *Coronavirus*, especially when the data was gathered from a specialised corpus on the Coronavirus pandemic. However, even though the occurrence of the

Coronavirus pandemic topic is frequent, the occurrence of metaphorically used contexts are not. Unlike the usage of *fight, combat,* and *battle*, it is not apparent that the context will be metaphorical if *the spread of* appears in the topic of the *Coronavirus pandemic*. This is because *the spread of* is not a metaphorically used phrase like *fight, combat,* and *battle.*

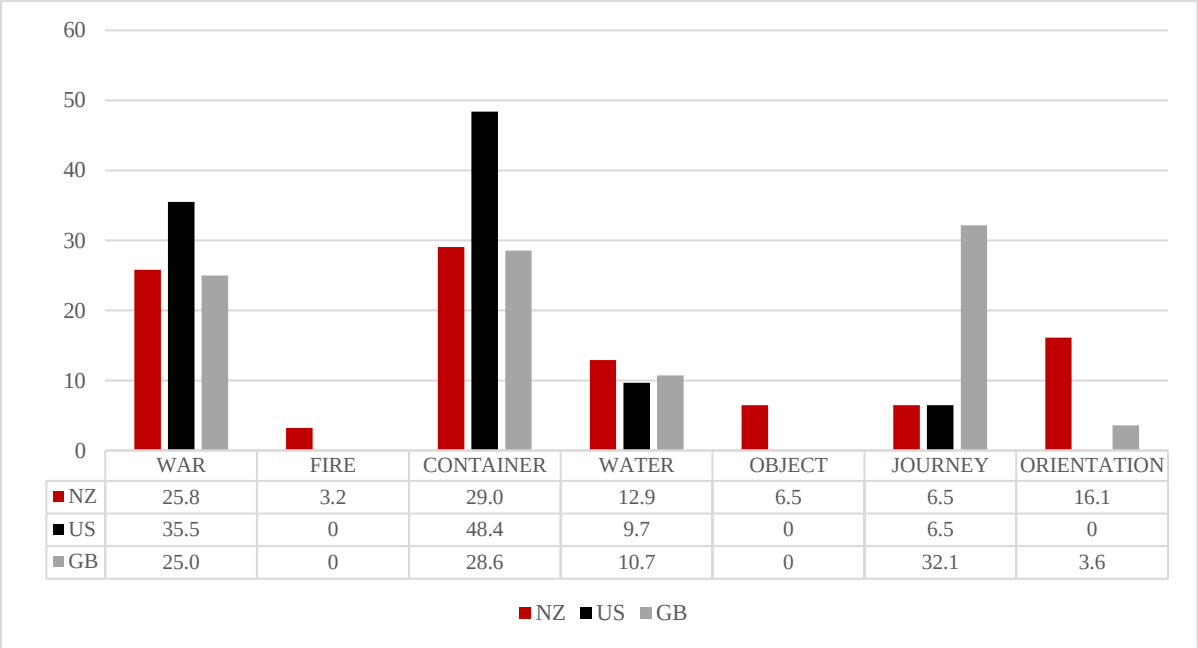
Out of the total occurrences of the topic *Coronavirus pandemic*, less than a third of the concordance lines appear in a metaphorical context. Table 4.17 illustrates the number and percentage of metaphorical contexts that appear with the topic *Coronavirus pandemic*.

Table 4.17 Occurrence of metaphors with the topic Coronavirus pandemic

		NZ	US	GB
April 2020	Metaphorical contexts	31 (32.6%)	31 (32.6%)	28 (30.8%)
April 2021	Metaphorical contexts	9 (36%)	20 (21.1%)	27 (29.3%)

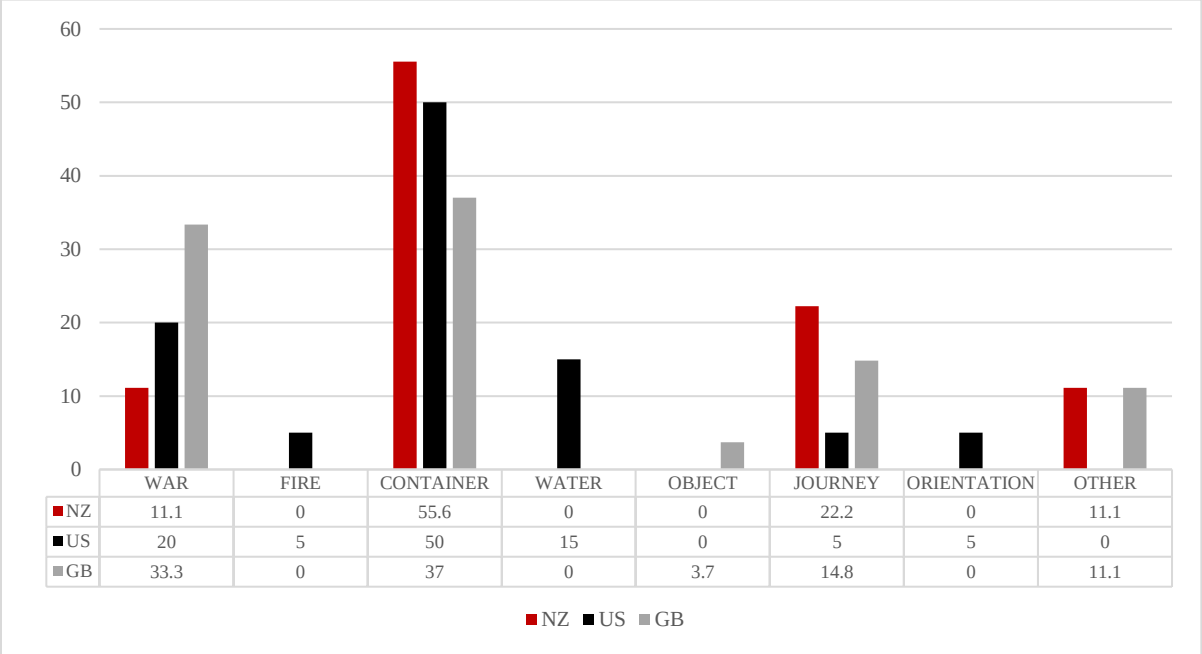
As can be seen, most of the contexts of *the spread of* are literal and not figurative. The results create a different picture on the framing of the spread of the virus as it is, in fact, mostly framed in literal terms and not metaphoric. Figures 4.4 and 4.5 illustrate the results from April 2020 and April 2021, respectively, for the occurrences of the conceptual metaphors.

In April 2020, it is the CONTAINER metaphor that is the most frequent, where it is most frequent in the US (48.4%), followed by NZ (29%) and GB (28.6%). The second most frequent conceptual metaphor is the WAR metaphor, where the US has the most occurrences (35.5%), followed by NZ (25.8%) and GB (25%). For GB, the JOURNEY metaphor is also quite frequent (32.1%) compared to the US (6.5%) and NZ (6.5%). The country that has the biggest variety of metaphors in April 2020 is NZ as it is the only country where the conceptual metaphors FIRE (3.2%) and OBJECT (6.5%) appear. Furthermore, NZ has the highest occurrence of ORIENTATION (16.1%) compared to GB (3.6%) and the US (0%), as well as the WATER metaphor (12.9%) compared to GB (10.7%) and the US (9.7%). It is the US that has the least variety of metaphors as only the conceptual metaphors WAR, CONATINER, WATER, and JOURNEY are used by the US. GB falls in between with the occurrence of ORIENTATION.



	WAR	FIRE	CONTAINER	WATER	OBJECT	JOURNEY	ORIENTATION
NZ	25.8	3.2	29.0	12.9	6.5	6.5	16.1
US	35.5	0	48.4	9.7	0	6.5	0
GB	25.0	0	28.6	10.7	0	32.1	3.6

Figure 4.4 Conceptual metaphors that appear with the spread of *in April 2020 in percent*



	WAR	FIRE	CONTAINER	WATER	OBJECT	JOURNEY	ORIENTATION	OTHER
NZ	11.1	0	55.6	0	0	22.2	0	11.1
US	20	5	50	15	0	5	5	0
GB	33.3	0	37	0	3.7	14.8	0	11.1

Figure 4.5 Conceptual metaphors that appear with the spread of *in April 2021 in percent*

As can be seen in figure 4.5, there is an increase in the occurrence of the CONTAINER metaphor in April 2021, where NZ has the most occurrences (55.6%), followed by the US (50%) and GB (37%). The results reflect that the CONTAINER metaphor is still the most frequent conceptual metaphor. In line with the results of the inflections of *fight* and the

lemmas *combat* and *battle,* GB has a higher occurrence of the WAR metaphor in April 2021 (33.3%), compared to the US (20%) and NZ (11.1%). It is NZ that uses the least diverse range of metaphors in April 2021, with zero occurrences of FIRE, WATER, OBJECT, and ORIENTATION, which is a big contrast to April 2020. The decrease in metaphorical variation can be explained by the general decrease of metaphoric contexts in April 2021 for NZ. Despite the low variety, NZ has a higher occurrence of JOURNEY (22.2%) and CONTAINER (55.6%), and the least occurrences of the WAR metaphor (11.1%). It is the US that has the biggest variety of metaphors, as it is the only country with occurrences of FIRE (5%), WATER (15%), and ORIENTATION (5%) metaphors. GB falls somewhat in between the US and NZ concerning diversity of metaphors, as it is the only country that has occurrences of the OBJECT metaphor (3.7%).

Implications of usage

The most surprising results are the low occurrences of the WATER metaphor in both April 2020 and April 2021. The spread of the virus has frequently been described as a *wave* (Craig 2020: 1029), which could have triggered more WATER metaphors being used. However, the WATER metaphors, or TSUNAMI metaphors as they have been referred to in previous work (e.g., Wicke & Bolognesi 2020, Semino 2021), have been found relatively infrequent compared to other conceptual metaphors (Wicke & Bolognesi 2020: 17). The metaphorical framing highlights the increase and decrease of positive cases and the different phases of the pandemic. The WATER metaphor can therefore frame the pandemic in a different way that WAR metaphors can.

(32) …*the spread of* coronavirus in the country continues *to surge*. (20-04-09 NZ)

(33) …distancing guidelines imposed *to stem the spread of* coronavirus. (21-04-09 US)

For example, using words such as *surge*,[21] as in sentence (32), describes the severity and the degree of the spread of the virus. The sentence furthermore draws the attention away from human interference as 'surging water' is not initiated by humans but is caused by natural

[21] The earliest definitions and usages of the verb *surge* in the OED relate to water. "To rise in great waves or billows" and "to rise and fall or toss on the waves", were two of the definitions that both dates to 1500 (*OED* 2022, accessed 12 April 2022).

forces. Sentence (33) is also considered a WATER metaphor as the word *stem*[22] is used to refer to the action of stopping the spread of the virus.

It has previously been argued that the WATER metaphor draws the blame away from humans as it is natural disasters, such as waves and tsunamis, that are to blame for the situation. (Charteris-Black 2021: 80). Humans are therefore not the origin of the situation. This could be argued to have a negative effect as humans do have the possibility to slow the spread of the virus if being careful of not transmitting it. However, as illustrated through (33), the metaphorical frame could be extended to refer to controllable vessels on the wave of viruses. It could therefore be argued that the WATER metaphor is apt in the context of the pandemic, as it highlights some aspects like the severity of the spread.

The FIRE metaphor has been argued to frame several aspects of the pandemic, such as the spread of the virus, different phases of the virus, healthcare worker's roles, explain measures and restrictions, as well as post-pandemic futures (Semino 2021: 54). Charteris-Black (2021: 63) also argues that the FIRE metaphor can highlight the role humans have in the transmission, such as that the speed in which the fire spreads can be spurred on by careless human behaviour. However, the FIRE metaphor also frames the disaster as not necessarily being human made.

(34) …plans to continue using a combination of testing and contact tracing *to stamp out the spread of* COVID-19. (20-04-26 NZ)

(35) …operation against illegal and clandestine gatherings that authorities believe are partly responsible for *fuelling the spread of* COVID-19. (21-04-21 US)

The action of stopping the spread of the virus can for example be framed as *stamping out* the spread as in (34). The metaphorical framing highlights the importance of testing to get control of the 'fire'. The word *fuelling*, as in sentence (35), can also be used to describe what is spurring on the spread. The metaphorical framing entails that human behaviour can affect the spread of the virus, which is in line with the statement of Charteris-Black (2021: 63).

Furthermore, like the WAR frame, the FIRE frame creates urgency and draws attention towards the situation (Semino 2021: 54). Unlike the WAR metaphor that expresses a short-

[22] Several of the definitions of the verb *stem* relate to vessels that travel on water. For example, "to urge the stem against, make headway against (a tide, current, gale, etc.)" is one of the earliest definitions of the word (*OED* 2022, accessed 12 April 2022). *Stem* could also originate from the expression "stem the tide" (*Macmillian* 2022, accessed 5 May 2022).

term framing of a situation, Semino (2021: 56) argues that the FIRE metaphor can also express future aspects of the pandemic, such as how to prepare for or prevent pandemics in the future. The future oriented framing of the pandemic was not found in the data. As the FIRE metaphor highlights aspects that the WAR metaphor misses, it could be argued that the FIRE frame contributes to a more wholesome picture of the pandemic.

The CONTAINTER metaphors occur frequently in the data. The finding is not surprising as the conceptual metaphor has been found to appear frequently with flu-like pandemics in the past (Taylor and Kidgell 2021: 8). Furthermore, the controlling of the spread of diseases and the efforts put towards stopping them have been found to be metaphorically framed as a CONTAINER in the past (Wallis and Nerlich 2005: 2636). The metaphors highlight the need to decrease the spread of the virus and to limit it within a certain area or 'container'.

(36) …as well as prevent, *contain*, and control *the spread of* COVID-19 at all state facilities. (21-04-14 US)

(37) …level 3 was a waiting room or a recovery room, designed to *restrict the spread of the virus*. (20-04-15 NZ)

The prevention of the spread of the virus can, for example, be portrayed through keeping the virus within a limited space through the word *contain* as in sentence (36). Stopping the spread can also be framed as in (37), that illustrates the need to bind or control the virus within a limited space through the word *restrict*.[23] As discussed in section 2.2.1, the CONTAINER metaphor belongs to the ontological metaphors, which structure our conceptualisation less than structural metaphors, as they are grounded in basic human experiences. Framing the spread of the pandemic in terms of basic concepts like a container, might then help to visualise and conceptualise the spread of the virus in a way that most humans can relate to more easily.

The OBJECT metaphors occurred relatively infrequent. The metaphors frame the virus in terms of objects.

(38) That's how we will *break the spread of* infection. (21-04-15 GB)

[23] Macmillian defines *restrict* as "to physically limit or control the movement of something or someone," (*Macmillain* 2022, accessed 5 May 2022), which is why *restrict* is considered as belonging to the CONTAINER metaphor.

(39) …a robust testing regime is one of the most effective ways to *blunt the spread of* the virus… (20-04-09 NZ)

Sentence (38), for example, frames the spread of the virus as a breakable object through the word *brake*, while (39) frames the spread of the virus as a sharp object/weapon that can be 'blunted' (slowed down) through testing. Both sentences highlight that there are actions humans can take in slowing or stopping the spread of the virus through prototypical properties of objects, such as breaking and becoming blunt. Whether the metaphor is considered as apt in the context of the pandemic is difficult to determine, as they appeared relatively infrequent. Still, they do highlight the human factor in the spread of the virus and entail a more active role than the WATER frame.

The JOURNEY metaphor occurred more frequently than some of the other structural metaphors like FIRE, OBJECT, and WATER. It typically frames the spread of the virus as a journey from one point to another where the virus is traversing.

(40) Similar polices have been adopted across Europe *to halt the spread of the* virus in educational settings. (20-04-08 GB)
(41) …the vaccine distribution can not *outpace the spread of* more infections versions of the virus. [spelling mistakes in the original] (21-04-03 US)

The metaphor can be realised through words such as *halt* in sentence (40), where the travelling virus needs to be stopped. The virus can also be challenged as in sentence (41), through framing the spread of the virus and vaccinations as a race, i.e., a type of movement from one place to another. In sentence (41), the virus is framed as *outpacing* the vaccine distribution. As illustrated through the examples, the JOURNEY metaphor can highlight the aspects of the situation and progress of the spread of the virus, as compared to human advances as in (41), and the means (policies) necessary to stop the spread from progressing further as in (40). The metaphor can then be considered as apt in the context of the pandemic.

The ORIENTATION metaphor relates to the increase and decrease in the number of positive cases through terms related to *up* and *down.*

(42) With *the spread of* the virus still *high*… (21-04-30 US)

(43) …the national effort *to slow down the spread of* Covid-19. (20-04-06 GB)

Large numbers of positive cases can for example be framed through the word *high* as in sentence (42), while the decrease of the spread of the virus can be framed as slowing *down*[24] as in (43). The orientational metaphors, as discussed in section 2.2.1, are basic to our conceptualisation and do not involve as much structuring as structural metaphors. As orientational metaphors furthermore originate in our basic experience as human beings, the majority of people can relate to and easily conceptualise the topic. The metaphor is therefore considered as apt at framing the Coronavirus pandemic.

The category OTHER includes metaphors such as THE CORONAVIRUS PANDEMIC IS AN ACT (44), and THE CORONAVIRUS PANDEMIC IS AN INVESTEMENT (45).

(44) What *role* do schools *play* in *the spread of the epidemic*? (21-04-04 NZ)
(45) …the Finnish government is also 'preparing for *the costs of the spread of* the coronavirus through a supplementary budget'. (21-04-27 GB)

Both examples highlight different aspects with the spread of the virus. Sentence (44) frames the *role* people have in the spread of the virus to describe the effect they have in the transmission of the virus. Sentence (45) frames the effect of the spread of the virus as *costs*, i.e., the aftereffects and the situation that follows the situation.

4.3.1 Discussion of *the spread of*

Concerning the variety of metaphors, as shown through figures 4.4 and 4.5, it is NZ that has the highest variety of metaphors in April 2020, and the US that has the highest variety in April 2021. As discussed in section 2.3.1, well-established and already known topics are less likely to be affected by metaphors. The earlier a wide variety of metaphors are used to frame a relatively new and unfamiliar topic, the more effect the metaphors have on the perception of the pandemic. A wider understanding and conceptualisation of the pandemic could arguably be better achieved in April 2020 compared to April 2021.

[24] *Slow down* could be argued to be classified as a JOURNEY metaphor if considered together as one fixed phrase that relates to speed. However, the phrase is categorised as an orientational metaphor as the two elements in the phrase are considered separately where *down* is interpreted as moving downward.

Furthermore, high occurrences of WAR metaphors could possibly skew the conceptualisation of the pandemic. According to the findings from April 2020 and April 2021, the spread of the Coronavirus is used with several metaphorical frames that do indeed highlight aspects such as human's role in the spread of the virus, the aftereffects of the pandemic, and several different aims like slowing, stopping, or containing the spread of the virus. As suggested by Semino (2021: 52) and Olza et.al. (2021:116), using a range of different metaphors to highlight the several aspects, stages, and perspectives of the pandemic is necessary to perceive a more wholesome picture of the situations concerning the Coronavirus pandemic. The results of *the spread of* reflect that GB, NZ, and the US do, to varying degrees, use different metaphorical framings in April 2020 and April 2021.

4.4 The WAR framing of the Coronavirus pandemic

There are several factors that can explain the differences in frequency, occurrence, and usage of the WAR metaphor in NZ, the US and GB. First, the attitudes and historical relationship towards war are well established in most of people's minds and are therefore easily evoked. War can for example be associated with WWI and WWII, which are taught in schools in all three countries. Soldiers who died in battles and wars are still commemorated on ANZAC (Australian and New Zealand Army Corps) day in NZ (*New Zealand History* 2022), on Remembrance Day in the UK (*royal* 2022), and on Memorial Day in the US (*History* 2009). There are also the more recent wars such as the Vietnam war, the Afghanistan war, and the Cold war that are in more recent memory for many – not to mention the depiction of war in movies, books, games, and the like. Considering also that WAR metaphors also have been used in the context of diseases since the 17th century (cf. 2.4.1), it is expected that the WAR metaphors would be used to frame the Coronavirus pandemic.

The use of the WAR metaphors reflects a nuanced picture with both positive and negative implications of usage. Flusberg, Matlock, and Thibodeau's (2018: 11) guidelines on how to best apply WAR metaphors in public discourse, could be used as a justifying argument for their usage in the framing of the Coronavirus pandemic. The first to consider is whether the issue poses an unavoidable threat, and if there is a clear outcome of the 'war', i.e., if there is a clear win and lose scenario. The fact that the Coronavirus pandemic was an unavoidable threat is clear as it spread across the globe in a matter of weeks. However, it is not clear when the virus can be considered 'defeated'. On the one hand, the pandemic can be seen as being 'won' when the virus is completely gone. On the other hand, the pandemic can be considered

won when the population gains immunity and the virus can spread freely without causing severe illness. The first scenario is now known to be unachievable, making the second scenario more plausible. Based on these conclusions, the WAR metaphor does not fit the first requirement of the guideline.

Another aspect of the use of WAR metaphors, as argued by Flusberg, Matlock, and Thibodeau (2018: 11), is to avoid hyperbolic use. When other topics such as *other diseases, misinformation, vaccine hesitancy*, *aftereffects*, and the other topics that are metaphorically framed like politics and economy, the usage of the metaphors can be considered as hyperbolic. Especially in the US, where frequency of the words in general are much higher than GB and NZ, can cause the WAR metaphors not to raise the urgency and attention as intended.

The third factor to consider is when to use WAR metaphors. Flusberg, Matlock, and Thibodeau (2018: 11) suggest that using the WAR frame at the beginning of a crisis could create positive outcomes, such as rousing people to action and drawing attention towards the issue. The authors do point out that the positive results of the usage of the metaphors depend on the context. If it is used in contexts with issues that expand over longer periods of time, using WAR metaphors might be damaging as they can carry negative entailments and feelings. These negative entailments have been shown to cause anxiety and fear as discussed in section 2.4.2 and 2.4.3, which can cause undesired reactions. Even though the WAR metaphors in the topic of the *Coronavirus pandemic* decreased in April 2021, they are still present in the discourse of the pandemic.

As reflected through the results of *the spread of*, WAR metaphors are not the most common metaphors. In fact, the CONTAINER metaphor is the most frequently used conceptual metaphor in both April 2020 and April 2021 for all three countries. There are also occurrences of other metaphors like FIRE, WATER, and OBJECT that portray the pandemic in different ways than the WAR metaphors do. Furthermore, in the US and NZ, WAR framing of *the spread of* drops from April 2020 to April 2021, while it increases in GB. There is also evidence that several other metaphors are used to frame the pandemic, which contributes to highlighting more aspects of the pandemic.

4.4.1 What happened in society?

The effects WAR metaphors can have, as argued by several authors (cf. 2.3.1 and 2.4.2), are complex and do not always affect people in the same way. It is then interesting to look at

some societal factors. The possible effect the WAR framing of the Coronavirus pandemic has had, or failed to have, can for example be seen through the response of the people.

For example, the usage of the WAR metaphors seems to have missed its purpose of uniting people and appeal to a 'shared' sacrifice. There have been several protests in all the three countries against the restrictive measures since the beginning of the pandemic, and even during 2021 (e.g., *Reuters* 2021, *BBC* 2020, *CNBC* 2021). The demonstrations also happened despite NZ and GB having a higher occurrence of the context *unity* (though there were no sources of demonstrations occurring during April 2020 and April 2021 in NZ). The lack of solidarity could, furthermore, as argued by Sabucedo, Alzate, and Hur (2020: 619), be manifested through the irrational and selfish behaviour of hoarding food and health supplies. NZ, the US, and GB all experienced problems of hoarding at the beginning of the pandemic.

There were also accusations of certain communities and ethnic groups being responsible for the transmission of the virus. In the US, people blamed African Americans for the large number of positive cases (Bentley 2020: 2), and there was an increase in racist and xenophobic behaviour towards Asians as they were also blamed for the spread of the virus (Croucher, Nguyen & Rahmani 2020: 1). In GB, minorities, immigrants, and Muslims were also publicly blamed by a conservative MP for causing a new wave of transmissions (Stone 2020). All cases fail to see the socioeconomic factors behind the more rapid spread of the virus in some communities than others (Bentley 2020: 1). The habit of blaming minority groups for the spread of viruses and germs is not a new phenomenon (for an overview, see Gover, Harper, & Langton 2020: 652–3). There are several factors that contribute to racism and blaming certain groups in society for the spread of the virus. For example, Donald Trump's "Wuhan-virus" and "China-virus" (Rogers, Jakes, & Swanson 2020) is a linguistic factor that transfers the blame to China. The presence of WAR metaphors in the discourse of the pandemic does not seem to have had a significant effect on unity based on the examples provided. However, as discussed in section 2.3.1, there are several factors as to what types of metaphors influence some peoples' perception of a topic.

There are therefore people who have 'self-sacrificed' and adhered to the restrictive measures as the spread of the virus has indeed decreased in all three countries after periods of increased transmission of the disease (see appendix, figure 10). There were furthermore individuals (e.g., *BBC* 2022) and organisations (e.g., *Boehringer Ingelhaim* 2022, *Voa* 2022) that spent several hours contributing to the 'collective fight' against the virus.

5 CONCLUSION AND SUMMARY

The criticism the WAR metaphors have received in both academia and the media have been solemnly based on either qualitative or quantitative approaches. This thesis aimed to conduct a close study of the use of the WAR metaphor and to consider the frequency in which it occurs in the discourse of the Coronavirus pandemic. The WAR metaphor highlights urgency, as it frames several aspects of the pandemic like the need for resources, restrictions, methods, effort, and unity, as well as descriptions of the situation and individual's encounter with the virus. However, there are several aspects that the WAR metaphor fails to highlight, which can create a narrower understanding and framing of the situation. It is therefore important, as mentioned by previous authors (e.g., Olza et.al 2021: 116), that using a variety of metaphors to frame the pandemic is necessary to capture the complexity of the phenomenon. As found through the analysis of *the spread of*, the pandemic is framed using other conceptual metaphors such as CONTAINER, FIRE, WATER, ORIENTATION, JOURNEY, and OTHER, which highlight different aspects of the pandemic that the WAR metaphors fail to do.

The analysis of the inflections of *fight* and the lemmas *combat* and *battle* also revealed an overuse of the WAR metaphor as a variety of topics like *other diseases, misinformation, aftereffects, vaccine hesitancy, PPE and measures*, and other metaphorical contexts are also described in terms of war. This overuse of the metaphor caused several topics, like *vaccine hesitancy* and *aftereffects*, that do not share as similar schematic structure with war as the pandemic does, to be framed in terms of war. This extended use of the metaphor could be considered as hyperbolic (Flusberg, Matlock, & Thibodeau 2018: 11), which can possibly affect the impact the metaphors have.

The metaphorical usage of the WAR metaphors is furthermore affected by the societal and historical contexts. The usage of certain contexts like *body*, correlates with the rise and fall of Corona-related deaths. NZ has the lowest occurrences of the WAR metaphors overall in the data, GB has a higher occurrence overall both in April 2020 and April 2021, while the US decreases the occurrence of the WAR metaphor the most. The decrease in the occurrence of the WAR metaphors for all countries in April 2021 can be explained by the decreased urgency of the pandemic, the lowered positive cases and Corona-related death during April 2021, and the presence of the vaccine.

Finally, as briefly reflected in 4.4.1, the effect the metaphors have are not clear-cut and not that easily interpreted and discovered through human actions, as some responded with unity and adhered to the restrictions and guidelines, while others rejected them.

5.1 Limitations and future studies

As a guideline for future studies, some limitations and decisions concerning this thesis should be considered. First, the thesis only looked at WAR metaphors used in April 2020 and April 2021. More extensive research might include other time periods or investigate an overall usage of the WAR framing, which can provide further insights into different factors that might affect the use of metaphors. Second, the words chosen for this thesis were *fight, combat,* and *battle* that only touch upon a small part of the WAR frame. Future studies might consider words such as *attack, victory, soldier,* and *frontline,* as they are also considered to be a big part of the frame. These words have also been found in the discourse about the Coronavirus pandemic by several authors (e.g., Wicke & Bolognesi 2020: 13, Gulzar et.al. 2021, Charteris-Black 2021). Looking at other words might furthermore shed light on other usages of the WAR framing, as the analysis of *fight, combat,* and *battle* revealed that the words were dependent on their use in general. Other metaphorical words might therefore frame other topics, contexts, and aspects of the Coronavirus pandemic in different ways than what this thesis uncovered. Furthermore, looking at other aspects of the pandemic than *the spread of,* might reveal other metaphors used in the context of the pandemic.

As mentioned in section 3.6.2, this thesis only looked at the semantic context of the WAR metaphors, however, future studies might consider the metaphors that appear in the context of the WAR metaphors. There might for example be several war-related words used in the surrounding context of *fight, combat,* and *battle,* or other conceptual metaphors might be used to highlight different aspects of the same context. There are also the discrepancies and weaknesses of the corpus as mentioned in section 3.1.1, such as that not all texts are taken from newspaper articles and magazines, which makes it a slightly less specialised corpus. The corpus furthermore does not annotate for paralinguistic features, the author, or how widespread the different texts are, which are factors that affect the influence of metaphors.

Lastly, applying an automatic annotation tool would have been useful so that the sorting and finding patterns would not have been as time-consuming. However, there might have been patterns and semantic and topical classifications that might have been missed if not

for a manual analysis and vice versa. Future studies might therefore apply a more automatic detection of semantic and topical classifications to see if other patterns are found.

REFERENCES

Abdel-Raheem, Ahmed. 2021. Where Covid metaphors come from: reconsidering context and modality in metaphor. *Social Semiotics*, 1–40. doi:10.1080/10350330.2021.1971493

Amidon, Timothy R., Alex C. Nielsen, Ehren H. Pflugfelder, Daniel P. Richards, & Sonia H. Stephens. 2021. Visual risk literacy in "flatten the curve" COVID-19 visualizations. *Journal of Business and Technical Communication*, 35(1), 101–109. doi: 10.1177/1050651920963439

Baker, Paul. 2006. *Using corpora in discourse analysis*. London: Continuum.

BBC. 19 April 2020. Coronavirus: US protests against and for lockdown restrictions. https://www.bbc.com/news/av/world-us-canada-52344540 (last accessed 6 May 2022)

BBC. 6 January 2022. The three generations who volunteer at Covid vaccination centres. https://www.bbc.com/news/uk-england-beds-bucks-herts-59896807 (last accessed 6 May 2022)

Bentley, Gillian R. 2020. "Don't blame the BAME: Ethnic and structural inequalities in susceptibilities to COVID-19*." American journal of human biology: the official journal of the Human Biology Council*. 32(5), 1–5. doi:10.1002/ajhb.23478

Boehringer Ingelheim. 2022. COVID-19: Volunteering in Australia and New Zealand. https://www.boehringer-ingelheim.com/covid-19/global-support-program/australia-and-new-zealand/volunteering (last accessed 6 May 2022)

Brezina, Vaclav. 2018. *Statistics in corpus linguistics: a practical guide*. Cambridge: Cambridge University Press.

Brinton, Laurel J. & Elizabeth Closs Traugott. 2005. *Lexicalization and Language Change.* Cambridge: Cambridge University Press.

Buchanan, Larry, Quoctrung Bui & Jugal K Patel. 3 July 2020. Black lives matter may be the largest movement in U.S. history. *The New York Times*. https://www.nytimes.com/interactive/2020/07/03/us/george-floyd-protests-crowd-size.html (last accessed 13 April 2022)

Burnette, Jeni. L., Crystal. L. Hoyt, Nicholas, Buttrick, & Lisa A. Auster–Gussman. 2022. Well–being in the time of COVID –19: Do metaphors and mindsets matter? *International Journal of Psychology*. 57(1), 87–95. https://doi.org/10.1002/ijop.12785

Burr, Vivien. 2015. *Social constructivism.* 3rd ed. London: Routledge.

Carvalho, Thiago, Florian Krammer & Akiko Iwasaki. 2021. The first 12 months of COVID-19: a timeline of immunological insights. Nature Reviews. *Immunology*, 21(4), 245–256. https://doi.org/10.1038/s41577-021-00522-1

Castro-Seixas, Eunice. 2021. War metaphors in political communication on COVID-19. *Frontiers in sociology*, 5, 1–11. doi:10.3389/fsoc.2020.583680

Centres for Disease Control and Prevention. 2022. CDC Museum COVID-19 Timeline.https://www.cdc.gov/museum/timeline/covid19.html https://www.instituteforgovernment.org.uk/charts/uk-government-coronavirus-lockdowns (last updated 5 January 2022) (last accessed 13 April 2022)

Chapman, Connor M. & DeMond S. Miller. 2020. From metaphor to militarized response: the social implications of "we are at war with COVID-19"–crisis, disasters, and pandemics yet to come. *International Journal of Sociology and Social Policy*. 40(9/10), 1107–1124. doi:10.1108/IJSSP-05-2020-0163

Charteris-Black, Jonathan. 2014. *Analysing political speeches: rhetoric, discourse and metaphor*. Palgrave Macmillan.

Charteris-Black, Jonathan. 2018. Competition metaphors and ideology. *The Routledge Handbook of Language and Politics* 1st ed. Vol. 1. 202–217. Routledge.

Charteris-Black, Jonathan. 2021. Metaphors of Coronavirus: Invisible Enemy or Zombie Apocalypse? *Springer International Publishing* AG.

Cipolletta, Sabrina & Maria Cristina Ortu. 2021. COVID-19: Common Constructions of the Pandemic and Their Implications, *Journal of Constructivist Psychology*, 34(3), 278–294. doi:10.1080/10720537.2020.1818653

CNBC. 15 December 2021. Thousands protest Covid rules as New Zealand crosses 90% fully vaccinated milestone. https://www.cnbc.com/2021/12/16/thousands-protest-covid-rules-as-new-zealand-hits-90percent-fully-vaccinated.html (last accessed 6 May 2022)

Craig, David. 2020. Pandemic and its metaphors: Sontag revisited in the COVID-19 era. *European Journal of Cultural Studies*, 23(6), 1025–1032. doi: 10.1177/1367549420938403

Croucher, Stephen M., Thao Nguyen, & Diyako Rahmani. 2020. "Prejudice toward Asian Americans in the COVID-19 pandemic: The effects of social media use in the United States. *Frontiers in Communication*. 5(39). doi:10.3389/fcomm.2020.00039

Davies, Mark. 2016–. *Corpus of News on the Web (NOW)* https://www.english-corpora.org/now/ (last accessed 9 April 2022)

Davies, Mark. 2019–. *The Coronavirus Corpus*. https://www.english-corpora.org/corona/ (last accessed 13 April 2022)

Davies, Mark. 2021. The Coronavirus Corpus: Design, construction, and use. *International Journal of Corpus Linguistics* 26(4), 583–598. https://doi.org/10.1075/ijcl.21044.dav

Deignan, Alice. 2005. *Metaphor and corpus linguistics*, Vol. 6. Philadelphia: John Benjamins Publishing Company.

Deignan, Alice & Liz Potter. 2004. A corpus study of metaphors and metonyms in English and Italian. *Journal of pragmatics*, 36(7), 1231-1252. doi:10.1016/j.pragma.2003.10.010

Elmore, Kristen C., & Myra Luna-Lucero. 2017. Light bulbs or seeds? How metaphors for ideas influence judgments about genius. *Social Psychological and Personality Science*, 8(2), 200–208. https://doi.org/10.1177/1948550616667611

Evans, Vyvyan & Melanie Green. 2006. *Cognitive Linguistics: an introduction*. Edinburgh: Edinburgh University Press.

Fillmore. Charles J. 2006. Frame Semantics. *In Encyclopedia of Language & Linguistics* (Second Edition, pp. 613–620). Elsevier Ltd. https://doi.org/10.1016/B0-08-044854-2/00424-7

Flusberg, Stephen, Teenie Matlock, and Paul H. Thibodeau. 2018. War metaphors in public discourse. In *Metaphor and Symbol*, 33(1), 1–18. doi:10.1080/10926488.2018.1407992

Gee, Paul J. 2005. *An Introduction to Discourse Analysis: Theory and Method*. 2nd ed., New York: Routledge.

Gee, Paul J. 2011. *How to do discourse analysis: A toolkit*. New York: Routledge.

Gee, Paul J., & Michael Handford. 2012. The Routledge Handbook of Discourse Analysis. *Routledge Handbooks in Applied Linguistics*. London: Routledge.

Geeraerts, Dirk & Hubert Cuyckens. 2012. Introducing Cognitive Linguistics. *The Oxford Handbook of Cognitive Linguistics*. 1–21. doi:10.1093/oxfordhb/9780199738632.013.0001

Gibbs, Raymond. 2014. Conceptual metaphor in thought and social action. In Mark J. Landau, Michael D. Robinson, & Brian P. Meier (eds.). *The power of metaphor: Examining its influence on social life*, 17–40. American Psychological Association.

Gillis, Matilda. 2020. Ventilators, missiles, doctors, troops … the justification of legislative responses to COVID-19 through military metaphors. *Law and Humanities*, 14(2), 135–159. doi: 10.1080/17521483.2020.1801950

Gover, Angela R., Shannon B. Harper, & Lynn Langton. 2020. Anti-Asian Hate Crime During the COVID-19 Pandemic: Exploring the Reproduction of Inequality. *American Journal of Criminal Justice*, 45(4), 647–667. https://doi.org/10.1007/s12103-020-09545-1

Gov.uk. 2020. Prime Minister's statement on coronavirus (COVID-19): 17 March 2020. https://www.gov.uk/government/speeches/pm-statement-on-coronavirus-17-march-2020 (last accessed 25 April 2022)

Gulzar, Kanwal, Saira A. Kahn, Imdad U. Kahn, Saood Khan & Sidra Amina. 2021. AN ANALYSIS OF WAR LANGUAGE IN COVID 19 SPEECHES: A COMPARATIVE STUDY. *Humanities & Social Sciences Reviews*, 9(3), 1399–1412. https://doi.org/10.18510/hssr.2021.93139

Hall, Michael C., Peter Fieger, Girish Prayag, & David Dyason. 2021. Panic buying and consumption displacement during COVID-19: Evidence from New Zealand. *Economies*, 9(24), 1–13. https://doi.org/10.3390/economies9020046

Harding, Luke, Rowena Mason, Dan Sabbagh, Mattha Busby, Denis Campbell & Owen Bowcott. 17 April 2020. Boris Johnson and coronavirus: the inside story of his illness. *The Guardian*. https://www.theguardian.com/world/2020/apr/17/boris-johnson-and-coronavirus-inside-story-illness (last accessed 6 April 2022)

Hauser, David J., & Norbert Schwarz. 2015. The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions. *Personality and Social Psychology Bulletin*, 41(1), 66–77. doi:10.1177/0146167214557006

Hauser, David J., & Norbert Schwarz. 2020. The war on prevention II: Battle metaphors undermine cancer treatment and prevention and do not increase vigilance. *Health communication*, 35(13), 1698–1704. doi:10.1080/10410236.2019.1663465

Hendricks, Rose. K., Zsófia Demjén, Elena Semino, & Lera Boroditsky. 2018. Emotional implications of metaphor: Consequences of metaphor framing for mindset about cancer. *Metaphor and Symbol*, 33(4), 267–279. doi:10.1080/10926488.2018.1549835

History. 2009. Memorial Day. https://www.history.com/topics/holidays/memorial-day-history (last updated 16 May 2022) (last accessed 18 May 2022)

History. 2021. 2021 events. https://www.history.com/topics/21st-century/2021-events#disasters-violence (last updated 20 January 2022) (last accessed 13 April 2022).

Hunston, Susan. 2010. How can a corpus be used to explore patterns? In Anne O'Keeffe & Michael McCarthy (eds.), *The Routledge Handbook of Corpus Linguistics*, 152–166. Taylor & Francis Group.

Institute of Government. 2022. Timeline of UK government coronavirus lockdowns and restrictions https://www.instituteforgovernment.org.uk/charts/uk-government-coronavirus-lockdowns (last accessed 13 April 2022)

Islentyeva, Anna. 2020. On the Front Line in the Fight against the Virus: Conceptual Framing and War Patterns in Political Discourse. *Yearbook of the German Cognitive Linguistics Association*, 8(1), 157–180. https://doi.org/10.1515/gcla-2020-0010

Johnstone, Barbara. 2018. *Discourse analysis*. 3rd ed. New Jersey: Wiley Blackwell.

Kearns, Robin. 2021. Narrative and metaphors in New Zealand's efforts to eliminate COVID–19. *Geographical Research*, 59(3), 324–330. https://doi.org/10.1111/1745-5871.12492

Kimmel, Michael. 2010. Why we mix metaphors (and mix them well): Discourse coherence, conceptual metaphor, and beyond. *Journal of Pragmatics*, 42(1), 97–115. doi:10.1016/j.pragma.2009.05.017

Koller, Veronica, Andrew Hardie, Paul Rayson, & Elena Semino. 2008. Using a semantic annotation tool for the analysis of metaphor in discourse. *Metaphorik.de*, 15(1), 141–160.

Kövecses, Zoltán. 2006. *Language, mind, and culture: A practical introduction*. Oxford: Oxford University Press.

Kövecses, Zoltán. 2010. *Metaphor: A practical introduction*. 2nd ed. Oxford: Oxford University Press.

Kövecses, Zoltán. 2015. *Where metaphors come from: Reconsidering context in metaphor*. USA: Oxford University Press.

Kövecses, Zoltán. 2018. Metaphor in media language and cognition: A perspective from conceptual metaphor theory. *Lege Artis*, 3(1), 124–141.

Kövecses, Zoltán. 2022. Extended conceptual metaphors theory: the cognition-context interface. In Ulrike Schröder, Milene Mendes de Oliveira, M. M & Adriana Maria Tenuta (eds.). *Metaphorical Conceptualizations:(Inter) Cultural Perspectives* 45(23), 23–39. Berlin: Walter de Gruyter.

Kövecses, Zoltán, Laura Ambrus, Dániel Hegedűs, Ren Imai, & Anna Sobczak. 2019. "The Lexical vs. the Corpus-Based Method in the Study of Metaphors." In Marianna Bolognesi, Mario Brdar, & Kristina Š. Despot (eds). *Metaphor and Metonymy in the Digital Age: Theory and Methods for Building Repositories of Figurative Language*, 149–173. Amsterdam: John Benjamins.

Kozlova, Tetyana. 2021. Cognitive Metaphors of Covid-19 Pandemic in Business News. *SHS Web of Conferences*, 100, 1–7. https://doi.org/10.1051/shsconf/202110002004

Lakoff, George. 1987a. *Women, fire, and dangerous things: what categories reveal about the mind*. Chicago: University of Chicago Press.

Lakoff, George. 1987b. The Death of Dead Metaphor. *Metaphor and Symbolic Activity*, 2(2), 143–147. https://doi.org/10.1207/s15327868ms0202_5

Lakoff, George, & Mark Johnson. 1980. *Metaphors we live by*. Chicago: University of Chicago press.

Landau, Mark J. & Lucas A. Keefer. 2014. This is like that: Metaphors in public discourse shape attitudes. *Social and Personality Psychology Compass*, 8(8), 463–473. https://doi.org/10.1111/spc3.12125

Landau, Mark, J., Lucas A. Keefer. & Zachary K. Rothschild. 2014. Epistemic motives moderate the effect of metaphoric framing on attitudes. *Journal of Experimental Social Psychology*, 53, 125–138. http://dx.doi.org/10.1016/j.jesp.2014.03.009

Landau, Mark, Jamie Arndt & Linda D. Cameron. 2018. Do metaphors in health messages work? Exploring emotional and cognitive factors. *Journal of Experimental Social Psychology*, 74, 135–149. http://dx.doi.org/10.1016/j.jesp.2017.09.006

Log-likelihood. n.d. Log-likelihood and effect size calculator. https://ucrel.lancs.ac.uk/llwizard.html (last accessed 13 April 2022)

Macmillan Dictionary. 2022. https://www.macmillandictionary.com/ (last accessed 6 May 2022)

Musu, Costanza. 8 April 2020. War metaphors sued for COVID-19 are compelling but also dangerous. *The Conversation*. https://theconversation.com/war-metaphors-used-for-covid-19-are-compelling-but-also-dangerous-135406 (last accessed 14 April 2022)

Nerlich, Brigitte, & Rusi Jaspal. 2021. Social representations of 'social distancing' in response to COVID-19 in the UK media. *Current Sociology*, 69(4), 566–583. https://doi.org/10.1177/0011392121990030

New Zealand History. 16 April 2020. Anzac day. https://nzhistory.govt.nz/war/anzac-day/introduction (last accessed 13 April 2022)

Nie, Jing-Bao, Adam Gilbertson, Malcom de Roubaix, Ciara Staunton, Antonvan Niekerk, Joseph D. Tucker & Stuart Rennie. 2016. Healing Without Waging War: Beyond Military Metaphors in Medicine and HIV Cure Research. *American Journal of Bioethics*, 16(10), 3–11. https://doi.org/10.1080/15265161.2016.1214305

Olza, Inés, Veronica Koller, Iraide Ibarretxe-Antuñano, Paula Pérez-Sobrino, & Elena Semino. 2021. The# ReframeCovid initiative: From Twitter to society via metaphor. *Metaphor and the Social World*, 11(1), 98–120. https://doi.org/10.1075/msw.00013.olz

Ourworldindata. 2022a. Daily new confirmed COVID-19 cases per million people. (US, GB, NZ). https://ourworldindata.org/explorers/coronavirus-data-explorer?facet=none&Metric=Confirmed+cases&Interval=7-day+rolling+average&Relative+to+Population=true&Color+by+test+positivity=false&country=USA~GBR~NZL (last accessed 13 April 2022)

Ourworldindata. 2022b. Daily new confiremd COVID-19 deaths per million people (US, GB, NZ). https://ourworldindata.org/explorers/coronavirus-data-explorer?facet=none&Interval=7 day+rolling+average&Relative+to+Population=true&Color+by+test+positivity=false&country=USA~GBR~NZL&Metric=Confirmed+deaths (last accessed 13 April 2022)

Ourworldindata. 2022c. Share of people who completed the initial COVID-19 vaccination protocol (US, GB, NZ). https://ourworldindata.org/explorers/coronavirus-data-explorer?facet=none&Metric=People+fully+vaccinated&Interval=7-day+rolling+average&Relative+to+Population=true&Color+by+test+positivity=false&country=USA~GBR~NZL (last accessed 13 April 2022)

Oxford English Dictionary. 2022. https://www.oed.com/ (last accessed 13 April 2022)

Panzeri, Francesca, Simona Di Paola, & Filippo Domaneschi. 2021. Does the COVID-19 war metaphor influence reasoning? *Plos one*, 16(4), 1–20. https://doi.org/10.1371/journal.pone.0250651

Payne, Thomas E. 2011. *Understanding English Grammar: A Linguistic Introduction*. Cambridge: Cambridge University Press.

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

Reisfield, Gary M. & George R. Wilson. 2004. Use of metaphor in the discourse on cancer. *Journal of Clinical Oncology*, 22(19), 4024–4027. https://doi.org/10.1200/JCO.2004.03.136

Reuters. 24 April 2021. Anti-lockdown protesters defy restrictions in central London march. https://www.reuters.com/world/uk/anti-lockdown-protesters-defy-restrictions-central-london-march-2021-04-24/ (last accessed 6 May 2022)

Rogers, Katie, Lara Jakes, & Ana Swanson. 13 March 2020. Trump Defends Using 'Chinese Virus' Label, Ignoring Growing Criticism. *The New York Times.* https://www.nytimes.com/2020/03/18/us/politics/china-virus.html (last updates 18 March 2021) (last accessed 6 May 2022)

Rosch, Eleanor. 1999. Reclaiming concepts. *Journal of consciousness studies*, 6(11), 61–77.

Royal. 2022. Remembrance Day. https://www.royal.uk/remembrance-day (last accessed 16 May 2022)

Sabucedo, José-Manuel, Mónica Alzate, & Domenico Hur. 2020. COVID-19 and the metaphor of war (COVID-19 y la metáfora de la guerra). *International Journal of Social Psychology*, 35(3), 618–624. doi:10.1080/02134748.2020.1783840

Schnepf, Julia, & Ursula Christmann. 2022. "It's a war! It's a battle! It's a fight!": Do militaristic metaphors increase people's threat perceptions and support for COVID–19 policies? *International Journal of Psychology*, 57(1), 107–126. https://doi.org/10.1002/ijop.12797

Semino, Elena. 2017. Corpus linguistics and metaphor. In Barbara Dancygier (ed). *The Cambridge Handbook of Cognitive Linguistics*, 463–76. Cambridge: Cambridge University Press.

Semino, Elena. 2021. "Not Soldiers but Fire-fighters"–Metaphors and Covid-19. *Health Communication*, 36(1), 50–58. https://doi.org/10.1080/10410236.2020.1844989

Semino, Elena, Zsófia Demjén & Jane Demmen. 2016. An integrated approach to metaphor and framing in cognition, discourse, and practice, with an application to metaphors for cancer. *Applied linguistics*, 39(5), 625–645. https://doi.org/10.1093/applin/amw028

Semino, Elena, Zsófia Demjén, Jane Demmen, Veronika Koller, Sheila Payne, Andrew Hardie, & Paul Rayson. 2017. The online use of Violence and Journey metaphors by patients with cancer, as compared with health professionals: a mixed methods study. *BMJ supportive & palliative care*, 7(1), 60–66. https://doi.org/10.1136/bmjspcare-2014-000785

Shapiro, Johanna. 2018. "Violence" in medicine: necessary and unnecessary, intentional and unintentional. *Philosophy, Ethics, and Humanities in Medicine: PEHM*, 13(1), 7–7. https://doi.org/10.1186/s13010-018-0059-y

Singh, Maanvi. 5 November 2020. 'Count every vote': protesters take to streets across US as ballots tallied. *The Guardian*. https://www.theguardian.com/us-news/2020/nov/04/protests-votes-ballot-counting-us-election (last accessed 13 April 2022)

Steen, Gerard, Aletta G. Dorst, J. Berenike Herrmann, Anna A. Kaal, Tina Krennmayr & Trijntje Psama. 2010. *A method for linguistic metaphor identification: From MIP to MIPVU*. Vol. 14. Amsterdam: John Benjamins.

Steen, Gerard, Gudrun Reijnierse, & Christian Burgers. 2014. When do natural language metaphors influence reasoning? A follow-up study to Thibodeau and Boroditsky. *PloS One*, 9(12), 1–25. https://doi.org/10.1371/journal.pone.0113536

Stefanowitsch, Anatol. 2020. *Corpus linguistics: A guide to the methodology*. Berlin: Language Science Press.

Stone, Jon. 31 July 2020. England lockdown: Tory MP blames ethnic minorities and immigrants for new coronavirus outbreak. *Independent.* https://www.independent.co.uk/news/uk/ politics/coronavrius-outbreak-north-england-lockdown-whittaker-ethnic-minorities-a9647706.html (last accessed 6 May 2022)

Stubbs, Michael. 2001. *Words and phrases: Corpus studies of lexical semantics*. Oxford: Blackwell publishers.

Taylor, Charlotte & Jasmin Kidgell. 2021. Flu-like pandemics and metaphor pre-covid: A corpus investigation. *Discourse, Context & Media*, 41, 1–11. https://doi.org/10.1016/j.dcm.2021.100503

Thibodeau, Paul H. & Lera Boroditsky. 2011. Metaphors we think with: The role of metaphor in reasoning. *PloS one*, 6(2), 1–11. https://doi.org/10.1371/journal.pone.0016782

Thibodeau, Paul H. & Frank H. Durgin. 2011. Metaphor aptness and conventionality: A processing fluency account. *Metaphor and Symbol*, 26(3), 206–226. https://doi.org/10.1080/10926488.2011.583196

Thibodeau, Paul. H., Rose K. Hendricks, & Lera Boroditsky. 2017. How linguistic metaphor scaffolds reasoning. *Trends in cognitive sciences*, 21(11), 852–863. https://doi.org/10.1016/j.tics.2017.07.001

Tisdall, Simon. 21 March 2020. Lay off those war metaphors, world leaders. You could be the next casualty. *The Guardian.* https://www.theguardian.com/commentisfree/2020/mar/21/donald-trump-boris-johnson-coronavirus (last accessed 14 April 2022)

Tognini-Bonelli, Elena. 2001. *Corpus Linguistics at Work*. Amsterdam: John Benjamins Publishing Company.

Tribble, Christopher. 2010. What are concordances and how are they used? In Anne O'Keeffe & Michael McCarthy (eds). *The Routledge Handbook of Corpus Linguistics*, 167–183. Taylor & Francis Group. https://doi.org/10.4324/9780203856949-22

Unite Against Covid19. 2022. History of the COVID-19 Alert System. https://covid19.govt.nz/about-our-covid-19-response/history-of-the-covid-19-alert-system/#timeline-of-key-events (last updated 22 February 2022) (last accessed 13 April 2022)

Voa. 2022. COVID-19 Crisis: Ways to Help. https://www.voa.org/help-fight-covid (last accessed 6 May 2022)

Walker, Iona F. 2020. Beyond the military metaphor. *Medicine Anthropology Theory*, 7(2), 261–272. https://doi.org/10.17157/mat.7.2.806

Wallis, Patrick & Brigitte Nerlich. 2005. Disease metaphors in new epidemics: the UK media framing of the 2003 SARS epidemic. *Social science & medicine*, 60(11), 2629–2639. doi:10.1016/j.socscimed.2004.11.031

Wicke, Philipp & Marianna M. Bolognesi. 2020. Framing COVID-19: How we conceptualize and discuss the pandemic on Twitter. *PloS one*, 15(9), 1–24. https://doi.org/10.1371/journal.pone.0240010

World Health Organization. 2022. Archived: WHO Timeline - COVID-19. https://www.who.int/news/item/27-04-2020-who-timeline---covid-19 (last accessed 13 April 2022)

APPENDIX

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	35658	110	324	3127	2905	2159	1927	1987	1611	1452	1215	1315	1421	1841	1277	1428	1215
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.02	14.99	22.35	31.27	26.90	22.07	23.14	25.34	21.72	25.20	21.27	26.68	27.97	36.39	28.26	24.50	23.68
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 1: The frequency of the lemma combat *in the US in the Coronavirus corpus*

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	4757	8	53	680	550	344	301	203	203	217	215	213	154	187	180	153	120
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.00	1.09	3.66	6.80	5.09	3.52	3.61	2.59	2.74	3.77	3.76	4.32	3.03	3.70	3.98	2.62	2.34
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 2: The frequency of the lemma combat *in GB in the Coronavirus corpus*

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	1275	6	25	174	167	106	67	40	75	41	42	27	27	32	32	34	33
WORDS (M)	1428000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.00	0.82	1.72	1.74	1.55	1.08	0.80	0.51	1.01	0.71	0.74	0.55	0.53	0.63	0.71	0.58	0.64
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 3: The frequency of the lemma combat *in NZ in the Coronavirus corpus*

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	61354	220	351	2667	4578	3649	2999	3451	3273	2578	2345	2559	3020	3135	2108	2430	2177
WORDS (M)	1435000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.04	29.97	24.22	26.67	42.40	37.31	36.01	44.01	44.13	44.75	41.04	51.92	59.45	61.97	46.65	41.69	42.44
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 4: The frequency of the lemma battle *in US in the Coronavirus corpus*

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	9465	40	97	836	1196	810	538	489	452	520	369	405	340	485	310	267	283
WORDS (M)	1435000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.01	5.45	6.69	8.36	11.08	8.28	6.46	6.24	6.09	9.03	6.46	8.22	6.69	9.59	6.86	4.58	5.52
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 5: The frequency of the lemma battle *in GB in the Coronavirus corpus*

SECTION	ALL	20-01	20-02	20-03	20-04	20-05	20-06	20-07	20-08	20-09	20-10	20-11	20-12	21-01	21-02	21-03	21-04
FREQ	2429	20	25	155	249	201	141	105	121	159	129	84	45	69	43	117	41
WORDS (M)	1435000	7.3	14.5	100.0	108.0	97.8	83.3	78.4	74.2	57.6	57.1	49.3	50.8	50.6	45.2	58.3	51.3
PER MIL	0.00	2.72	1.72	1.55	2.31	2.05	1.69	1.34	1.63	2.76	2.26	1.70	0.89	1.36	0.95	2.01	0.80
SEE ALL SUB-SECTIONS AT ONCE																	

Figure 6: The frequency of the lemma battle *in NZ in the Coronavirus corpus*

Log-likelihood calculator results

Key:
O1 is observed frequency in Corpus 1
O2 is observed frequency in Corpus 2
%1 and %2 values show relative frequencies in the texts.
+ **indicates overuse** in O1 relative to O2,
- **indicates underuse** in O1 relative to O2

Item	O1	%1	O2	%2		LL	%DIFF	Bayes	ELL	RRisk	LogRatio	OddsRatio
Word	39743	36.80	567791	0.02	+	508630.16	168913.98	508608.47	0.00006	1690.14	10.72	2673.65

Figure 7: Log-likelihood results of the lemma fight

Log-likelihood calculator results

Key:
O1 is observed frequency in Corpus 1
O2 is observed frequency in Corpus 2
%1 and %2 values show relative frequencies in the texts.
+ **indicates overuse** in O1 relative to O2,
- **indicates underuse** in O1 relative to O2

Item	O1	%1	O2	%2		LL	%DIFF	Bayes	ELL	RRisk	LogRatio	OddsRatio
Word	9913	9.18	116665	0.00	+	130566.60	205070.58	130544.92	0.00003	2051.71	11.00	2258.96

Figure 8: Log-likelihood results of the lemma combat

Log-likelihood calculator results

Key:
O1 is observed frequency in Corpus 1
O2 is observed frequency in Corpus 2
%1 and %2 values show relative frequencies in the texts.
+ **indicates overuse** in O1 relative to O2,
- **indicates underuse** in O1 relative to O2

Item	O1	%1	O2	%2		LL	%DIFF	Bayes	ELL	RRisk	LogRatio	OddsRatio
Word	13497	12.50	273748	0.01	+	163550.47	118952.03	163528.78	0.00003	1190.52	10.22	1360.41

Figure 9: Log-likelihood results of the lemma battle

Table 1: Example sentences of the context resource *with examples from money resource*

Wolves players are making a donation to the Wolverhampton NHS Trust to aid the *fight* against coronavirus.	20-04-09 GB
Ardern proudly told us the $56 million laid aside last week to Maori to *fight* Covid 19 has already been allocated	20-04-09 NZ
…contribute their fair share by immediately injecting close to USD$300 billion in additional aid to *fight* the virus.	20-04-11 NZ
Iran asked the IMF for $5 billion from its Rapid Financing Initiative to help to *fight* the pandemic	20-04-08 US

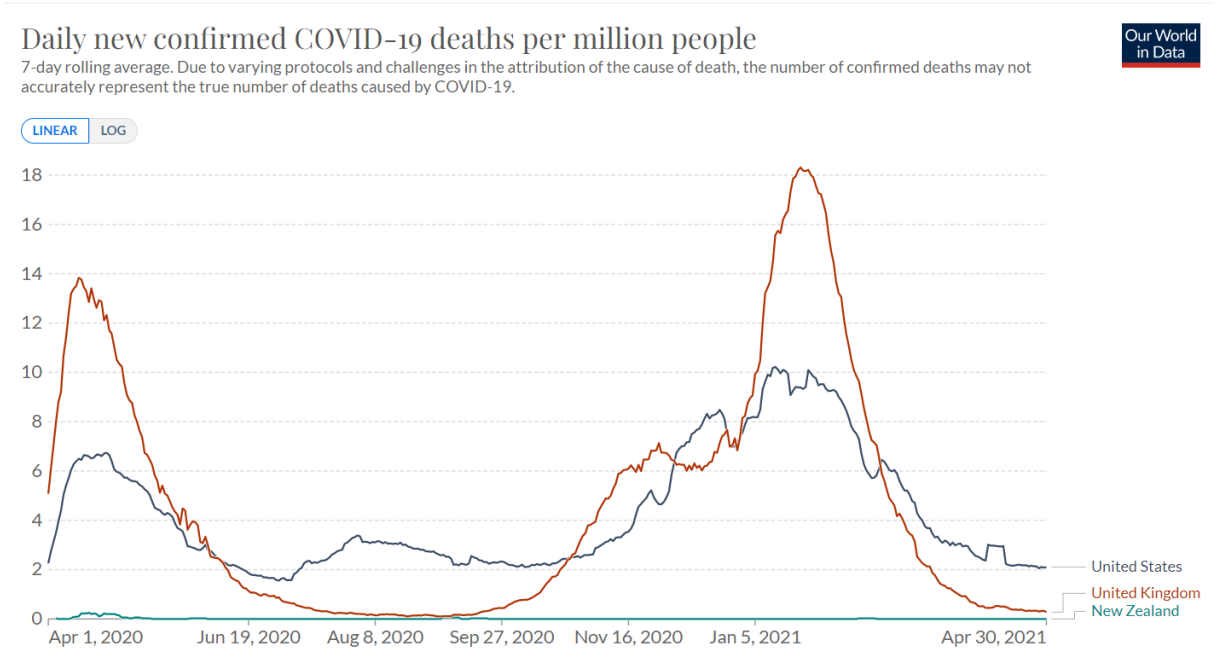


Figure 10: Confirmed corona-related deaths in the UK, US, and NZ (ourworldindata 2022b)

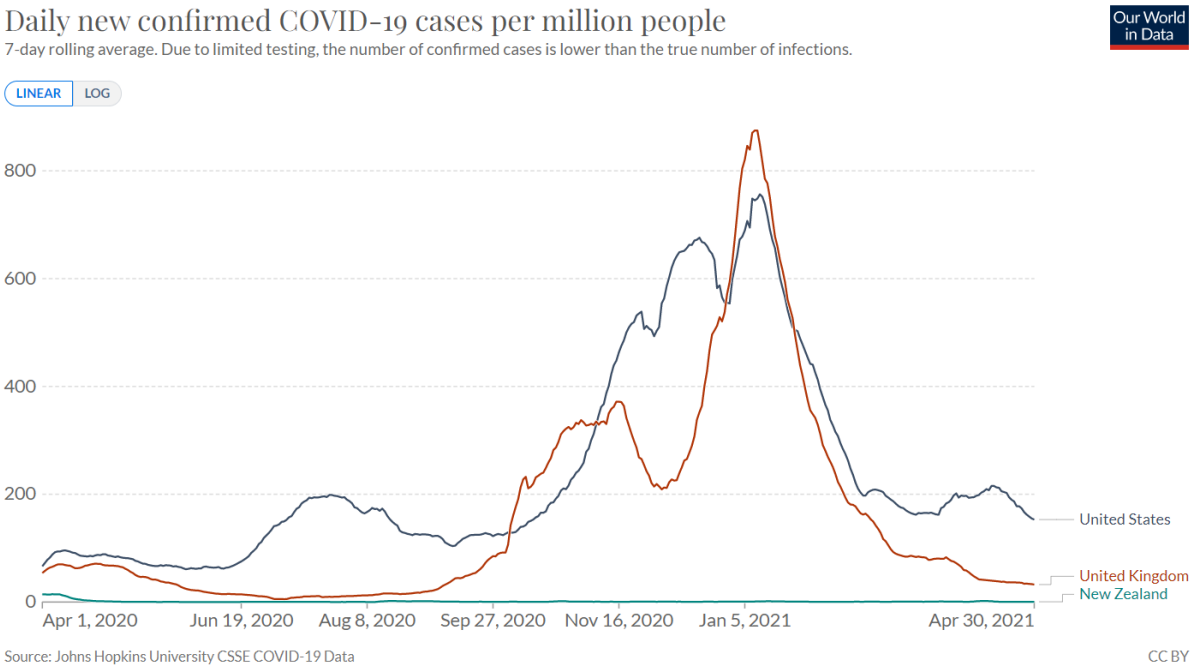


Figure 11: Confirmed positive cases of Covid-19 per million people in the UK, US, and NZ (ourworldindata 2022a)

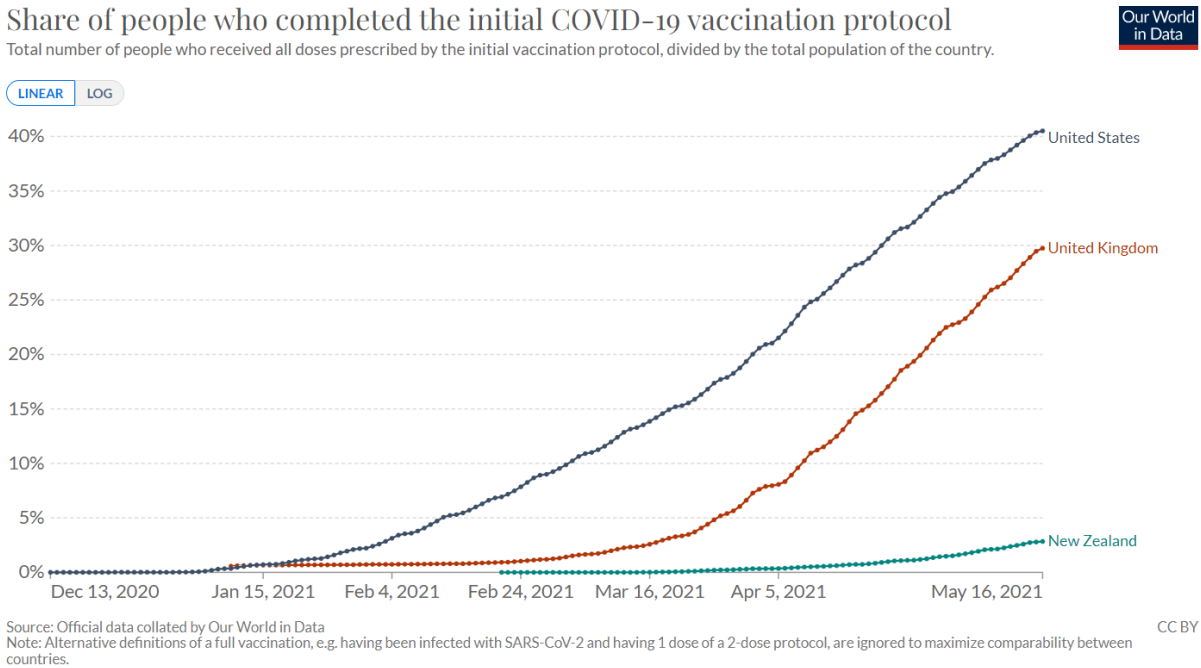


Figure 12: The percentage of people who completed the initial Covid-19 vaccination protocol in the UK, US, and NZ (ourworldindata 2022c)

Table 2: Percentage of occurrences of nouns and verbs across literal and metaphoric usages of the lemma battle

BATTLE		NOUNS	VERBS
NZ 2020	Literal	100	0
	Metaphoric	75.3	24.7
NZ 2021	literal	100	0
	Metaphoric	74.4	25.6
US 2020	Literal	100	0
	Metaphoric	60.6	39.4
US 2021	literal	76.9	23.1
	Metaphoric	69.0	31
GB 2020	Literal	100	0
	Metaphoric	50	50
GB 2021	literal	89.5	10.5
	Metaphoric	51.9	48.1

Table 3: The percentage of occurrences of nouns and verbs across literal and metaphoric usages of the lemma battle

COMBAT		NOUNS	VERBS
NZ 2020	Literal	66.7	33.3
	Metaphoric	3.1	96.9
NZ 2021	literal	100	0
	Metaphoric	0	100
US 2020	Literal	100	0
	Metaphoric	1.1	98.9
US 2021	literal	100	0
	Metaphoric	2.3	97.7
GB 2020	Literal	50	50
	Metaphoric	1.0	99
GB 2021	literal	100	0
	Metaphoric	4.1	95.9

Table 4: The percentage of occurrences of nouns and verbs across literal and metaphoric usages of the inflections fight, fighting, *and* fights

FIGHT		NOUNS	VERBS
NZ 2020	Literal	28.6	71.4
	Metaphoric	47.3	52.7
NZ 2021	Literal	50	50
	Metaphoric	52.3	47.7
US 2020	Literal	50	50
	Metaphoric	44.3	55.7
US 2021	Literal	53.8	46.2
	Metaphoric	51.7	48.3
GB 2020	Literal	41.7	58.3
	Metaphoric	53.4	46.6
GB 2021	Literal	66.7	33.3
	Metaphoric	50	50
FIGHTING		NOUNS	VERBS
NZ 2020	Literal	53.8	46.2
	Metaphoric	11.5	88.5
NZ 2021	Literal	44.4	55.6
	Metaphoric	23.8	76.2
US 2020	Literal	41.7	58.3
	Metaphoric	6.5	93.5
US 2021	Literal	40	60
	Metaphoric	3.8	96.3
GB 2020	Literal	50	50
	Metaphoric	0	100
GB 2021	Literal	46.2	53.8
	Metaphoric	3.4	96.6
FIGHTS		NOUNS	VERBS
NZ 2020	Literal	77.8	22.2
	Metaphoric	0	100
NZ 2021	Literal	100	0
	Metaphoric	75	25
US 2020	Literal	91.7	8.3
	Metaphoric	34.6	65.4
US 2021	Literal	86.7	13.3
	Metaphoric	41.4	58.6
GB 2020	Literal	95.1	4.9
	Metaphoric	24.1	75.9
GB 2021	Literal	100	0
	Metaphoric	44.4	55.6

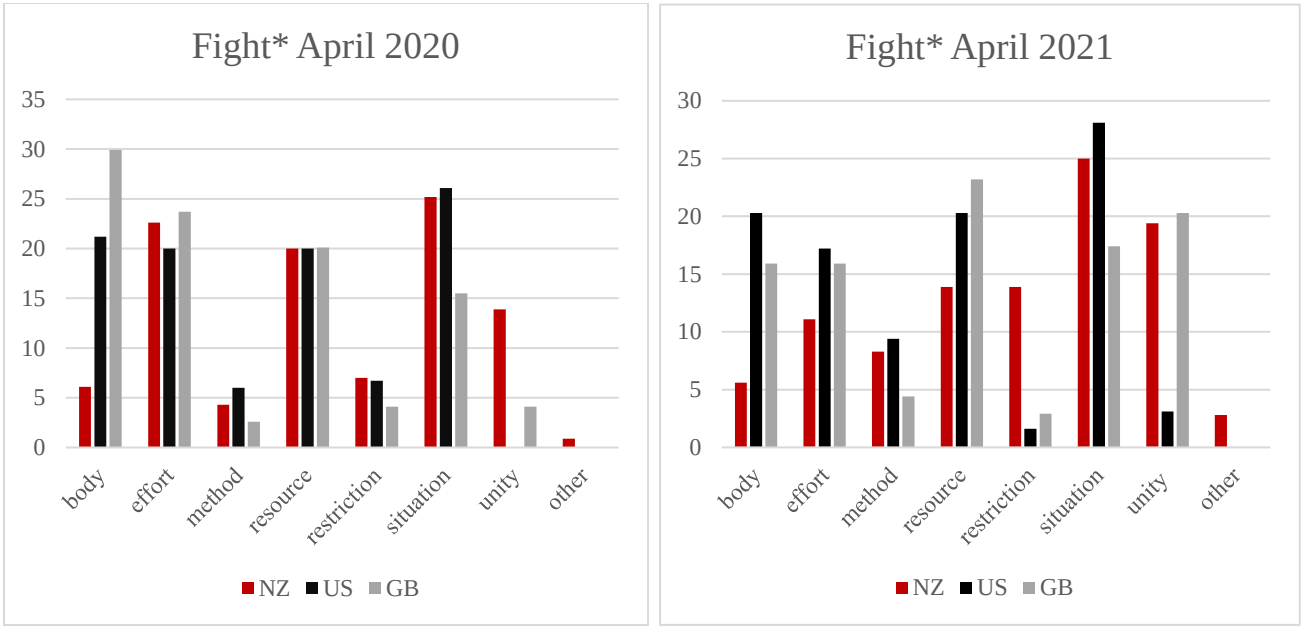


Figure 13: The distribution of the different semantic contexts that appear with the topic Coronavirus pandemic with all the inflections of fight *combined in April 2020 and April 2021*
**Note: The results for all the inflections of* fight *are combined*

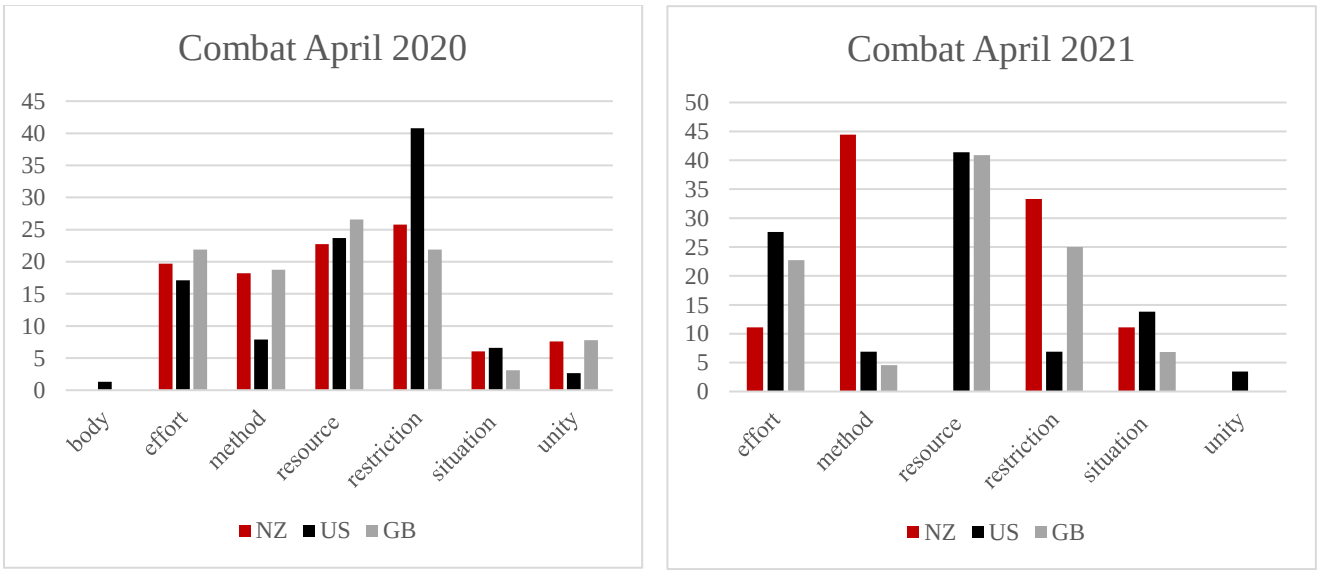


Figure 14: The distribution of the different semantic contexts that appear with the topic Coronavirus pandemic with the lemma combat *in April 2020 and April 2021*

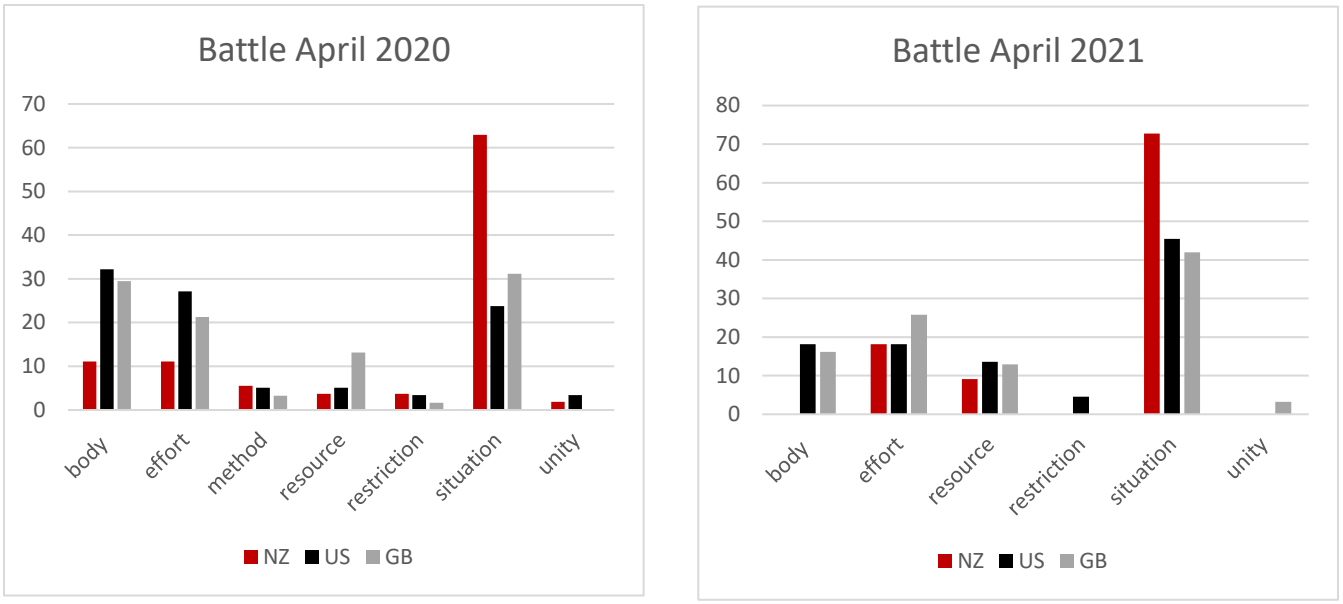


Figure 15: The distribution of the different semantic contexts that appear with the topic Coronavirus pandemic with the lemma battle *in April 2020 and April 2021*

Table 5: Contexts that appear with the inflection fighting *in April 2021*

FIGHTING APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	0	0	7	26.9	6	25
EFFORT	1	20	6	23.1	4	16.7
METHOD	2	40	2	7.7	0	0
RESOURCE	0	0	6	23.1	2	8.3
RESTRICTION	0	0	0	0	0	0
SITUATION	2	40	5	19.2	7	29.2
UNITY	0	0	0	0	5	20.8
TOTAL	5	100	26	100	24	100

Table 6: Contexts that appear with the inflection fights *in April 2021*

FIGHTS APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
RESOURCE	0	0	1	20	0	0
RESTRICTION	0	0	0	0	1	100
SITUATION	0	0	4	80	0	0
TOTAL	0	0	5	100	1	100

Table 7: Contexts that appear with the inflection fought *in April 2021*

FOUGHT APRIL 2021	**NZ**		**US**		**GB**	
	n	%	n	%	n	%
BODY	0	0	3	37.5	0	0
EFFORT	0	0	1	12.5	0	0
METHOD	0	0	2	25	0	0
SITUATION	0	0	1	12.5	0	0
UNITY	0	0	1	12.5	0	0
TOTAL	0	0	8	100	0	0

WORD 1 (W1): **COMBAT** (0.13)

	WORD	W1	W2	W1/W2	SCORE
1	SPORTS	1308	90	14.5	115.2
2	CORRUPTION	1126	12085	0.1	0.7
3	CLIMATE	1116	1497	0.7	5.9
4	TERRORISM	1097	3301	0.3	2.6
5	CHANGE	1068	1689	0.6	5.0
6	CRIME	907	2468	0.4	2.9
7	AIRCRAFT	741	19	39.0	309.2
8	SYSTEM	545	253	2.2	17.1
9	OPERATIONS	515	28	18.4	145.8
10	VIOLENCE	447	596	0.8	5.9
11	TRAFFICKING	429	531	0.8	6.4
12	POLLUTION	415	382	1.1	8.6
13	PROBLEM	407	153	2.7	21.1
14	ATHLETES	334	24	13.9	110.3
15	COMMISSION	331	18	18.4	145.8
16	AIR	330	195	1.7	13.4
17	PATHOGENS	320	17	18.8	149.3
18	MONEY	316	483	0.7	5.2

WORD 2 (W2): **FIGHT** (7.93)

	WORD	W2	W1	W2/W1	SCORE
1	CORRUPTION	12085	1126	10.7	1.4
2	TERRORISM	3301	1097	3.0	0.4
3	WAR	2684	92	29.2	3.7
4	BATTLE	2673	19	140.7	17.7
5	RIGHTS	2603	10	260.3	32.8
6	CHAMPION	2516	7	359.4	45.3
7	CRIME	2468	907	2.7	0.3
8	CANCER	2335	97	24.1	3.0
9	LIFE	2214	12	184.5	23.3
10	WAY	2153	18	119.6	15.1
11	CHANGE	1689	1068	1.6	0.2
12	NIGHT	1565	3	521.7	65.8
13	JUSTICE	1510	2	755.0	95.2
14	CLIMATE	1497	1116	1.3	0.2
15	FIRE	1390	59	23.6	3.0
16	WORLD	1256	104	12.1	1.5
17	STATE	1195	81	14.8	1.9
18	WARS	1168	5	233.6	29.5

Figure 16: Reuslts of the comparison search for the most frequent collocates preceding the lemmas combat *and* fight *in the NOW corpus in 2018 for all 20 countries in the corpus*

WORD 1 (W1): **BATTLE** (0.48)

	WORD	W1	W2	W1/W2	SCORE
1	CANCER	4077	2335	1.7	3.6
2	ROYALE	2083	1	2,083.0	4,340.6
3	DEPRESSION	930	158	5.9	12.3
4	BLAZE	908	358	2.5	5.3
5	MODE	771	86	9.0	18.7
6	CONTROL	722	655	1.1	2.3
7	FIRE	696	1390	0.5	1.0
8	LIFE	696	2214	0.3	0.7
9	GAME	638	570	1.1	2.3
10	WAY	624	2153	0.3	0.6
11	PLACE	614	1154	0.5	1.1
12	LINES	607	36	16.9	35.1
13	ADDICTION	574	213	2.7	5.6
14	ILLNESS	545	180	3.0	6.3
15	DISEASE	530	933	0.6	1.2
16	INJURIES	474	61	7.8	16.2

WORD 2 (W2): **FIGHT** (2.08)

	WORD	W2	W1	W2/W1	SCORE
1	CORRUPTION	12085	308	39.2	18.8
2	TERRORISM	3301	147	22.5	10.8
3	WAR	2684	355	7.6	3.6
4	BATTLE	2673	151	17.7	8.5
5	RIGHTS	2603	166	15.7	7.5
6	CHAMPION	2516	99	25.4	12.2
7	CRIME	2468	77	32.1	15.4
8	CANCER	2335	4077	0.6	0.3
9	LIFE	2214	696	3.2	1.5
10	WAY	2153	624	3.5	1.7
11	CHANGE	1689	177	9.5	4.6
12	NIGHT	1565	148	10.6	5.1
13	JUSTICE	1510	127	11.9	5.7
14	CLIMATE	1497	178	8.4	4.0
15	FIRE	1390	696	2.0	1.0
16	WORLD	1256	352	3.6	1.7

Figure 17: Reuslts of the comparison search for the most frequent collocates preceding the lemmas battle *and* fight *in the NOW corpus in 2018 for all 20 countries in the corpus*

SORTED BY FREQUENCY: CHANGE TO RATIO

WORD 1 (W1): **BATTLE** (3.81)

	WORD	W1	W2	W1/W2	SCORE
1	CANCER	3097	77	40.2	10.6
2	ROYALE	2083	0	4,166.0	1,094.8
3	DEPRESSION	843	57	14.8	3.9
4	BLAZE	786	17	46.2	12.2
5	MODE	693	26	26.7	7.0
6	LINES	601	2	300.5	79.0
7	WAY	496	4	124.0	32.6
8	GAME	482	59	8.2	2.1
9	CONTROL	478	10	47.8	12.6
10	ADDICTION	426	102	4.2	1.1
11	CRY	418	0	836.0	219.7
12	INJURIES	417	13	32.1	8.4
13	BRAIN	372	6	62.0	16.3
14	GROUND	367	3	122.3	32.1
15	LIFE	356	4	89.0	23.4
16	SURVIVAL	352	8	44.0	11.6
17	ILLNESS	339	23	14.7	3.9

WORD 2 (W2): **COMBAT** (0.26)

	WORD	W2	W1	W2/W1	SCORE
1	SPORTS	1299	12	108.3	411.9
2	CLIMATE	1102	153	7.2	27.4
3	CORRUPTION	1054	258	4.1	15.5
4	CHANGE	1041	86	12.1	46.1
5	TERRORISM	981	85	11.5	43.9
6	CRIME	810	45	18.0	68.5
7	AIRCRAFT	728	9	80.9	307.8
8	SYSTEM	538	176	3.1	11.6
9	OPERATIONS	478	9	53.1	202.1
10	TRAFFICKING	392	10	39.2	149.2
11	VIOLENCE	391	18	21.7	82.7
12	POLLUTION	386	62	6.2	23.7
13	ATHLETES	333	3	111.0	422.4
14	COMMISSION	331	16	20.7	78.7
15	PROBLEM	315	29	10.9	41.3
16	AIR	303	56	5.4	20.6
17	MONEY	301	26	11.6	44.1

Figure 18: Reuslts of the comparison search for the most frequent collocates preceding the lemmas battle *and* combat *in the NOW corpus in 2018 for all 20 countries in the corpus*