

## **Metaphorical conceptualisation of Covid-19 in parliamentary discourse: A corpus-assisted study**

Kwabena Sarfo Sarfo-Kantankah<sup>18</sup> Ebenezer Agbaglo<sup>19</sup> Frank Mensah, Jr.<sup>20</sup>

### **Abstract**

Ever since the advent of the Covid-19 pandemic, several parliaments around the world have had to completely or partially close down, yet parliaments perform key roles in fashioning out laws and policies for the fight against the disease. To this end, the views of parliamentarians about the pandemic and its related issues are crucial for legislation and control of the disease, yet studies have hardly examined the views and the discourses of parliamentarians around the Covid-19 pandemic. Employing a corpus-assisted methodological approach and conceptual metaphor theory, this study examines the discourses of Ghanaian parliamentarians around the disease in order to explore how the parliamentarians metaphorically construct the pandemic. The study finds that the Covid-19 pandemic is metaphorically constructed as an enemy and the fight against it construed as war. Being a war, it entails several constituent elements without which the war will be unsuccessful, including the soldiers of the war (medical workers, frontline workers, government, parliament), who need weapons (medical tools, personal protective equipment, vaccine) to battle Covid-19 on the battlefield (Ghana, hospitals, treatment centres) to avoid/reduce the number of casualties/victims (Ghanaians, economy, society ) by putting in place certain strategies (creation of a Covid-19 fund, protocols, quarantine). The study contributes to the ongoing discourses aimed at understanding the global experiences of the Covid-19 pandemic as well as an understanding that aspects of metaphor that reflect natural kinds of experience may be universal.

### **Keywords**

Metaphorical Conceptualisation, Covid-19, Coronavirus, Parliamentary Discourse, Corpus-Assisted Study, Metaphor of War, Metaphor of Violence

*First submission: July 2021; Revised: September 2021, Accepted: November 2021*

---

<sup>18</sup> Associate Professor, Department of English, University of Cape Coast, Ghana, <https://orcid.org/0000-0001-5662-2886>, [esarfo@ucc.edu.gh](mailto:esarfo@ucc.edu.gh)

<sup>19</sup> Demonstrator, Department of English, University of Cape Coast, Ghana, <https://orcid.org/0000-0002-4720-0662>, [ebengola@gmail.com](mailto:ebengola@gmail.com)

<sup>20</sup> Demonstrator, Department of English, University of Cape Coast, Ghana, [jfm4790@gmail.com](mailto:jfm4790@gmail.com)

## **Introduction**

The advent of the Covid-19 pandemic has led to several policy directions by governments the world over, including both advanced economies and developing ones.

According to Alon, Kim, Lagakos and VanVuren “[a]s COVID-19 made its way to less-developed countries, policy makers there largely followed suit with similarly sweeping lockdowns ... [y]et it quickly became clear that policy responses in the developing world could not just mimic those of the west” (Alon, Kim, Lagakos and VanVuren, 2020: 1). Notwithstanding the challenges with the developing world, governments have made several policy decisions to combat the pandemic. In making such decisions, parliaments have played major roles, including the passage of laws to allow governments to borrow and vote money to meet the financial demands posed by the disease. Since parliaments the world over perform similar functions including legislation and oversight, studying parliamentary reactions to the pandemic can provide a global appreciation of the disease. Our view is that understanding country-specific parliamentary discourses around the Covid-19 pandemic will help appreciate the universal experiences of the pandemic, hence our interest in highlighting the Ghanaian parliamentary experience of the pandemic.

On the 21st of January, 2020, the Government of Ghana (GoG) (Government of Ghana, 2020a), through the Health Ministry, issued a press statement announcing the outbreak of the Coronavirus disease in China. The Government further announced measures put in place to forestall any outbreak of the disease in Ghana. The measures included: (1) alert messages sent to all the regions in Ghana on the outbreak in addition to guidance information on the disease; (2) enhanced surveillance at points of entry especially the Kotoka International Airport; (3) an in-country capacity to diagnose 2019-nCoV by the Noguchi Memorial Institute for Medical Research; and (4) the screening of passengers from China. The statement further stated some prevention protocols, including regular handwashing, hand rubbing with alcohol, social and physical distancing. On 12th March, 2020, Ghana recorded the first two cases of Covid-19 in Ghana (Government of Ghana, 2020b). By 15th March, 2020, Ghana had recorded six (6) cases, which led to the GoG announcing the closure of universities, senior high schools and basic schools by 16th March 2020 together with enhanced protocols at all businesses and other workplaces, and establishments such as supermarkets, shopping malls and transport yards. On 28th March, GoG announced a 14-day partial lockdown in some areas of the country, beginning 30th March, 2020, at a point when 141 cases with five (5) deaths had been recorded (Afriyie, Asare, Amponsah and Godman, 2020). The World Health Organization (WHO) declared Covid-19 a global pandemic on 11th March, 2020, by which time the disease had become a public health emergency in Ghana needing urgent attention. The President of the Republic of Ghana gave two-weekly updates on measures taken to combat the disease.

While there have been several measures aimed at fighting the Covid-19 outbreak in Ghana, one body that needed to perform a very crucial role was the Parliament of Ghana. For instance, it was Parliament that passed the law to make the restrictions act possible so that the GoG could enforce the lockdown. It was Parliament’s duty to pass legislation to make it possible for the GoG to borrow money to fight the pandemic, as it had had serious financial implications for the GoG. But for parliaments to support the government in passing laws to tackle the pandemic demands a certain understanding of the pandemic by parliamentarians.

Even though several studies have examined discourses around Covid-19 (cf. Al Husain, 2020; Ivić and Petrović, 2020; Nor and Zulcafli, 2020; Wicke and Bolognesi, 2020; Luporini, 2021), with some adopting corpus-linguistic methodological approaches (see Almázan-Ruiz and Orrequia-Barea, 2020; Joharry and Turiman, 2020; Wicke and Bolognesi, 2020), studies have hardly looked at the Covid-19 pandemic from a parliamentary discourse perspective. This is surprising considering that parliament is central to an effective management of the disease.

Again, while a few of the studies have examined discourses around Covid-19 through metaphorical standpoints, in an attempt to provide some understanding of people's experience of the disease (see Al Husain, 2020; Ivić and Petrović, 2020; Tisdall, 2020; Wicke and Bolognesi, 2020; Luporini, 2021), we are yet to fully explore the extent to which the metaphorical conceptualisation of Covid-19 provides a global understanding and experience of the disease. This study, thus, explores the conceptual metaphor discourses of Ghanaian parliamentarians around the Covid-19 pandemic in order to:

Contribute to the ongoing discourses aimed at understanding the global experience of the Covid-19 pandemic;

Contribute to the understanding that aspects of metaphor that reflect natural kinds of experience may be universal, since conceptual metaphors can demonstrate some universality of languages and cultures (Kovecses, 2010).

The rest of the paper begins with a review of relevant studies on Covid-19 and a discussion of conceptual metaphor theory, in order to position the paper within the existing literature and theory. This is followed by a description of data and methods, analysis and discussion, and then conclusion.

## **1. Studies on Covid-19**

On December 31, 2019, the Chinese government drew the attention of the World Health Organisation (WHO) to pneumonia cases in Wuhan City in China. The cause was reportedly unknown and the disease was first named 2019-nCoV and then coronavirus (COVID-19) (Wicke and Bolognesi, 2020). Since then, the disease has spread quickly throughout China and to the rest of the world, affecting millions of people and killing many individuals (Dong and Gardner, 2020). Because of the pandemic's effect on people's health and countries' economies, governments all over the world are struggling to find ways to control the disease and minimize its negative effects (Dong and Gardner, 2020). Measures adopted by governments to control the spread of the disease include shutting down of schools and locking down of cities (Wicke and Bolognesi, 2020). The disease has also engendered research, predominantly from the field of public health and medicine (Mukumbang, 2020; Singleton and Soffin, 2020; Xue, Chen, Chen, Zheng, Li and Zhu, 2020), attempting to come up with a vaccine that can deal with the disease and also to recommend ways of boosting the immune system against the disease (Prajapat, Sarma, Shekhar, Avti, Sinha, Kaur, and Medhi, 2020) and dealing with anxiety that comes with the disease (Kumar and Somani 2020).

Aside from studies that have investigated the matter from public health perspectives, a few studies have examined coronavirus discourse from linguistic perspectives (Bischetti, Canal and Bambini 2021; Chen 2020; Essam and Abdo 2020; Muñoz, Díaz and Ibáñez, 2020; Zhang and Wu, 2020; Zhu, 2020), with the focus largely being on social media language related to coronavirus. From a sociolinguistic perspective, Zhu (Zhu, 2020), for instance, traced the reception and contextualization of the term, Chinese Virus, on Weibo, a Chinese social media platform. The study revealed that responses to the term fell into five linguistic categories (acronym, transliteration, coinage, verbal repetition and others), noting that these linguistic forms served functions such as insults, return insults, and resisting the power asymmetry between English and Chinese. Relying on data from press conferences, news media, and YouTube, Chen (Chen, 2020) similarly used Van Leeuwen's (Van Leeuwen, 2008) social actor analysis to examine the linguistic strategies used in disseminating public health information in multilingual communities in Taiwan, which focused on social inclusion and exclusion in collaborative efforts at combating the pandemic.

Diverging significantly from the social media focus of linguistic research on the coronavirus disease, Joharry and Turiman (Joharry and Turiman, 2020) used a corpus-assisted discourse

analytical approach to examine the discourses around coronavirus, as expressed in public letters to the editor in Malaysia. Also relying on corpus linguistic methods, Almázan-Ruiz and Orrequia-Barea (Almázan-Ruiz and Orrequia-Barea, 2020) analysed the headlines of UK newspapers related to coronavirus and found, among other things, that the dominant illocution in the corpus was warning. Sardinha (Sardinha, 2020) examined the discourses surrounding the disease, using coronavirus corpus as data. Chatti (Chatti, 2021) employed corpus-linguistic methods to study the military framing of Covid-19 in Tunisia. Other linguistic studies have focused on communication challenges in the coronavirus pandemic (Marler and Ditton, 2021; Piller, Zhang and Li, 2020; Zhang and Wu, 2020). From a communication perspective, Chatti (Chatti, 2021: 34) has noted that, while warfare metaphors allowed political and medical authorities to galvanise efforts and legitimise actions, there were questions about their conceptual significance and communicative relevance, as the “[f]ear-driven responses related to war imagery might evoke a distorted conception of the pandemic, negatively influencing prevention and treatment”. Some studies also focused on the conduct of English language test during the pandemic (Clark, Spiby and Tasviri, 2020; Green and Lung, 2020; Ockey et al., 2020).

While the aforementioned studies are insightful in revealing the linguistic aspects of the coronavirus pandemic, we still know very little about the discourses of the pandemic in the context of Africa, given that previous studies have largely focused on Asia (Chen, 2020; Zhang and Wu, 2020; Zhu, 2020), Europe (Bischetti et al., 2021; Shymko and Babadzhanova, 2020), and North America (Ockey et al., 2020), except for Chatti’s (Chatti, 2021) military framing of Covid-19, which was conducted in Tunisia. This is surprising given that African countries were considered vulnerable to the pandemic, with Ghana among the least resilient (Gilbert et al., 2020; Raga and Velde, 2020). Besides, studies have not investigated the language of coronavirus from the policymakers’ perspective. It is against this background that the present study examines the discourses of the Covid-19 pandemic in the Parliament of Ghana, a West African country, with the view of revealing how the problem of coronavirus is discussed in the selected parliament. Our focus on parliament is significant, given that the fate of the country in times of the coronavirus is largely dependent on the decisions taken by Parliament in respect of combating the spread of the virus.

## **2. Theory: conceptual metaphor, the metaphor of war and violence**

Study is grounded in the theory of conceptual metaphor, with a slant towards the metaphors of war, illness and violence. Conceptually, Lakoff and Johnsen (Lakoff and Johnsen, 1980, 2003: 5) define metaphor as understanding and experiencing one kind of thing in terms of another, which means mapping one conceptual domain to another domain or regarding one thing as a symbol of another.

Such a mapping usually creates incongruity or semantic tension at linguistic, pragmatic or cognitive levels (Charteris-Black, 2004). Metaphor also means talking and potentially thinking about one thing in terms of another because of a perceived similarity between the two (Semino, Demjén, Demmen, Koller, Payne, Hardie and Rayson, 2017). For example, life may be conceived of in terms of war: Life is war, where, cognitively, life is thought of as a struggle, a prolonged fight. According to Lakoff and Johnsen (Lakoff and Johnsen, 2003: 157):

Metaphors have entailments through which they highlight and make coherent certain aspects of our experience. A given metaphor may be the only way to highlight and coherently organize exactly those aspects of our experience. Metaphors may create realities for us, especially social realities. A metaphor may thus be a guide for future action. Such actions will, of course, fit the

metaphor. This will, in turn, reinforce the power of the metaphor to make experience coherent. In this sense metaphors can be self-fulfilling prophecies.

Semino et al. (Semino et al., 2017) state that metaphors are used to talk about abstract, complex, subjective and sensitive experiences (for example, illness, death and the emotions around them) in terms of more concrete, simpler, less subjective and less sensitive ones.

Within the last four decades, research has shown that illnesses conjure several metaphors that see those illnesses as danger and destruction (cf. Sontag 1978, 1989; Skott, 2002; Reisfield and Wilson, 2004; Semino et al., 2017). A disease treatment may be considered as war (Wicke and Bolognesi, 2020), as in: Disease Treatment is War, or Treating Disease is Waging War (EN MetaNet Wiki, 2013). An EN MetaNet Wiki (EN MetaNet Wiki, 2013) detailed analysis of Disease Treatment as War shows that the disease is considered as the enemy being fought against, medical professionals as the army, doctors as generals, body as the battlefield, medical tools and medicines as weapons, and applying treatment as fighting. Addressing a social problem can also be perceived as war (EN MetaNet Wiki 2013) and since the Covid-19 is a public health crisis, the fight against it can be considered as war. The use of metaphorical language in describing Covid-19 in Ghanaian parliamentary discourse demonstrates the concept of war, a way of seeing social reality of challenges, which calls for policy actions and strategies for handling the threat imposed by the disease (cf. Lakoff and Johnsen, 2003). Thus, the language of MPs describing the pandemic invokes the metaphors of war, illness and violence. The foregoing is what informs the current study.

### **3. Data and methods**

The data for this study are a corpus of 3,079,768 tokens/running words of Ghanaian parliamentary Hansards, which were downloaded from the website of the Parliament of Ghana (<https://www.parliament.gh>). The data cover January 2020 through December 2020. The period covers the time when discussions of the Covid-19 pandemic outbreak emerged in Ghana, January, through March when the pandemic peaked leading to the suspension and closure, by the Government of Ghana, of all public gatherings, including conferences, workshops, funerals, festivals, political rallies, sporting events and religious activities, universities, senior high schools, and basic schools, among others, to December 2020, when the spread of the pandemic had slowed and largely been controlled. The period also coincides with the final year of the life of the Seventh Parliament of the Fourth Republic of Ghana, which was dissolved on midnight of 6th January, 2021.

The study employs a corpus-linguistic methodological approach, a computer-aided analysis of very extensive, electronically-stored collections of transcribed utterances or written texts (Baker, 2010; McEnery and Hardie, 2012). Through Wordsmith Tools (Scott, 2012) the study uses concordances and collocates to examine in context identifiable topics and themes relating to Covid-19. Concordance is “a list of all attestations (or hits) of a particular search word or phrase, presented with a user-defined amount of context to the left and right of the search word or phrase” (Wulff and Baker, 2020: 161). The purpose is to identify which important features and discourse themes characterize the data, with reference to Covid-19. First, the Hansards were converted to .txt documents to make them Wordsmith-readable and all headers and unwanted texts deleted. Second, we ran concordances of the search term Covid and generated all the instances of the occurrence of Covid-19, which led to the generation of 1,201 concordance lines, as in Figure 1, which is the first 25 concordance lines. We then did a qualitative analysis using the concept of semantic prosody, “a form of meaning which is established through the proximity of a consistent series of collocates” (Louw, 2000: 57) or a form of evaluative meaning which “spread[s] over a unit of language which potentially goes well beyond the single orthographic

word and is much less evident to the naked eye” (Partington, 2004: 131-132). The concordance and semantic prosody analysis allows us to identify the thematic categories that characterise MPs’ discourse around Covid-19.

The corpus-methodological analysis is a lead up to the identification and discussion of the metaphors used to describe Covid-19. The identification of the metaphorical expressions is informed by Charteris-Black’s (Charteris-Black, 2004) criterion for identifying metaphors, namely: the presence of incongruity or semantic tension – either at linguistic, pragmatic or cognitive levels – resulting from a shift in domain use. We then examine the conceptual metaphors following Lakoff and Johnsen’ (Lakoff and Johnsen, 2003) conceptual metaphor analysis.

## **4. Analysis and discussion**

This section is divided into three. Section 4.1 identifies the patterns and themes around Covid-19. Sections 4.2 and 4.3 analyse and discuss the use of metaphorical language in MPs’ discursive construction of the Covid-19 pandemic.

### **4.1 Identifying patterns and themes around Covid-19**

This section identifies the patterns of collocates that indicate how MPs talk about Covid-19, using Figures 1 and 2 as illustrations. In the middle of Figure 1 is the search term COVID-19, which is highlighted.

At the left and right sides of COVID-19 are two windows of specified amount of words. These words form the context words which give us information about what is said about COVID-19. By observing the context words, we can glean some information about what is being said about COVID-19. For example, we learn about something being done to tackle COVID-19 (as in: help address, Line 1; to deal with, Line 4; assist the country in tackling, Line 11; the efforts of Government to combat, Line 13; to continue with the fight against, Line 23; to combat, Line 25; etc.). We also learn about establishing a fund and financial commitments (An act to establish ... National Trust Fund, Line 3; have spent a lot of money, Line 6; all these amounts, Line 10; to finance the Ghana, Line 14) and tests (tests, test, Lines 9, 20). We know that COVID-19 is described as a pandemic, which appears nine times. Considering verbal phrases such as to help address, to deal with, to combat, to assist ... in tackling, to continue with the fight against, to combat gives us a sense of what is being done to handle COVID-19.

N	Concordance	Set	Tag	Word #	Sent	Para	Para	Hea	Hea	Sect	Sect	File
1	to help address the outbreak of the COVID-19. Notable amongst them is			16,66	70	10	0	94		0	94	4th April 2020
2	of free water and electricity during the COVID-19 [MR IDRISU] period. So,			14,97	58	87	0	71		0	71	30 October 2 2021.
3	to. Long title – An act to establish the COVID-19 National Trust Fund to			33,92	1,7	18	0	88		0	88	2nd April 2020
4	that this is supposed to deal with the COVID-19 pandemic. There is no			44,00	1,8	97	1	83		0	84	19th March 21 2020
5	as a COVID-19 Budget. It is during the COVID-19 that we have had the			20,51	1,0	38	0	83		0	83	16 Dec 2020 2021.
6	have spent a lot of money on COVID-19. If I calculate direct and			54,48	2,3	10	0	91		0	91	14 Aug 2020. 2020
7	and as we observe the protocols of COVID-19, to be available to listen to			2,580	11	70	0	11		0	11	17 July 2020 2020.
8	quarters as the 'herbal wonder drug' or "COVID organics" for short'. Mr			2,133	86	92	0	69		0	69	20 May 2020 2020.
9	you for directing the conduct of COVID-19 tests. I hope that the results			3,889	16	95	0	11		0	11	20 May 2020 2020.
10	to sum up all of these amounts under COVID-19 Alleviation Programme, the			16,87	74	42	0	67		0	38	7 Aug 2020.b 2020.
11	to assist the country in tackling the COVID-19 pandemic. This US\$100			16,92	71	96	0	95		0	95	4th April 2020 2020.
12	by saying that all is lost because the COVID-19 pandemic has also			12,20	45	38	0	41		0	41	6 Aug 2020.b 2020
13	the efforts of Government to combat the COVID-19 pandemic, by providing an			27,10	1,2	39	0	70		0	70	2nd April 2020 2020.
14	) to finance the Ghana COVID-19 Emergency Preparedness			10,68	62	19	0	26		0	26	6 Nov 2020. t 2021.
15	Minister communicated as part of the COVID-19 Alleviation and			16,67	68	36	0	56		0	56	6 Aug 2020.b 2020.
16	Buah: Mr Speaker, I have seen a lot of COVID-19 - related issues on the			2,466	59	35	0	10		0	10	30 April, 2020 2020.
17	concerted efforts made towards this COVID-19 pandemic yielded results			5,204	21	22	0	29		0	27	23 October 2 2021.
18	time. We all know that due to this COVID-19 pandemic, the capital			44,57	1,9	53	0	75		0	75	14 Aug 2020 2020.
19	sector to respond to the challenges of COVID-19. I am particular about him			16,08	60	10	0	43		0	43	30 July 2020 2020.
20	for us to have a second test for COVID-19 for Hon Members of			3,042	96	79	0	18		0	18	10 July 2020 2020.
21	to help prevent, contain and manage COVID-19 which undoubtedly has			44,95	1,9	82	1	56		0	70	20th March 21 2020.
22	Mr Speaker, suffice to add that in this COVID-19 pandemic era, we know			8,940	32	23	0	38		0	38	29 October 2 2021.
23	to continue with the fight against COVID-19. Hopefully, we shall be out			20,60	65	10	1	12		0	24	7 Nov 2020.b 2021.
24	, although the negative impact of the COVID-19 pandemic has been			1,898	78	27	0	99		0	99	7 July 2020 2020.
25	protocols introduced to combat the COVID-19 pandemic have resulted in			32,96	1,4	37	0	55		0	55	14 Aug 2020. 2020. v

Figure 1: A screenshot of the first 25 of 1,201 concordance lines.

It must be noted that the context window can be widened and/or the concordance display sorted according to the words in the left and/or right-hand context (for a detailed analysis of how to read concordances, see Wulff and Baker, 2020). In other words, there are several ways in which the concordance lines can be manipulated to observe the context words in order to explore various meaningful patterns. Thus, another way to observe the concordance lines and identify the most salient thematic issues is to examine the patterns of the collocates, that is, words that typically co-occur with Covid-19, as shown in Figure 2. The salient collocates, with their number of occurrence, from L1-L5 are: L1 – Ghana 25, combat 07, novel 06, disease 05; L2 – impact 39, fight 31, combat 15, spread 13, cases 12, CSM 11, Ghana 10, fighting 10, exposed 9; L3 – finance 19, impact 17, outbreak 11, impacted 10, systems 9, result 8, due 7, establishment 7, affected 7, implementation 7, posed 7; L4 – food 11, government 9, situation 6; L5 – government 16, million 8, afflicted 8, Ghana 6, health 6. The salient R1-R5 collocates are: R1 – year 2, related 2; R2 – National 53, Emergency 37, related 32, response 09, protocols 9, cases 8, Alleviation 8, patients 8, virus 8; R3 – Trust 54, preparedness 25, response 11, expenditure 11, pandemic 9; R4 – Fund 52, assist 10, programme 9; R5 – Bill 30, response 1, health 8.

N	L5	L4	L3	L2	L1	Centre	R1	R2	R3	R4	R5
1	the	the	the	of	the	COVID	19	pandemic	the	the	the
2	to	to	to	the	of		year	and	and	fund	to
3	of	in	of	to	this		related	national	trust	and	of
4	in	of	and	by	against			emergency	mr	to	bill
5	and	and	this	impact	to			we	is	is	response
6	for	is	finance	fight	for			has	has	speaker	in
7	as	that	impact	in	ghana			is	preparedness	has	and
8	that	we	in	with	on			related	to	we	we
9	government	as	mr	that	that			the	it	of	is
10	is	or	are	combat	with			mr	we	have	that
11	we	with	that	for	coronavirus			on	in	not	mr
12	this	food	is	speaker	and			in	speaker	mr	are
13	speaker	for	outbreak	spread	from			as	that	would	be
14	has	government	on	because	about			which	have	in	have
15	with	have	be	during	speaker			era	would	it	gh
16	have	on	impacted	cases	post			to	response	that	not
17	million	by	for	mr	as			this	not	be	speaker
18	mr	speaker	it	on	is			response	expenditure	assist	some
19	on	mr	systems	csm	combat			but	for	on	as
20	been	not	result	from	under			protocols	which	programme	for
21	by	it	due	ghana	have			cases	an	are	this
22	afflicted	this	establishr	fighting	novel			alleviation	pandemic	us	with
23	ghana	who	affected	and	because			patients	also	if	health
24	it	situation	implemen	exposed	disease			virus	are	as	been
25	health	would	posed	coronavir	before			because	of	its	it

Figure 2: First 25 patterns of the collocates of Covid-19.

The above-mentioned collocates can be grouped into two major thematic categories, namely: (1) Covid-19 as a threat and crisis and its impact: emergency, spread, outbreak, cases, pandemic, impact(ed), affected, expenditure, etc.; and (2) Fight against Covid-19, including what is being done, the means and agents: fight(ing) (against), combat, response, protocols, alleviation, trust (fund), preparedness, response, assist, government, etc. These two themes are analysed and discussed in the next two sections.

#### 4.2. Covid-19 as an enemy, a threat, a crisis, an invasion, a weapon

The Covid-19 pandemic is discursively and metaphorically constructed as an enemy, an invader, a threat and a crisis, with an overwhelming impact. Simply put, Covid-19 can be conceptualised as an invasion (Covid-19 is an invasion).

Goatly (Goatly, 2007) has noted that every disease can be constructed as an attack by invaders, that is, viruses or bacteria, or foreign bodies from outside. In other words, the pandemic has invaded Ghana and may strike or cause illnesses and death, and so the country must defend itself, fight and combat the pandemic by every means possible. For example, the Speaker of Parliament describes Covid-19 as the invisible enemy: “[w]e shall face every emergency, respond to every call to duty and never draw back as we support the Executive in the work of Ghana and for Ghana against the invisible enemy, COVID-19” (19 May 2020/Col.007), which is ready to destroy and/or to kill. Consider the following examples (note: italicised and/or underlined are mine; they indicate the focus of discussion).

(1) Mr Ben Abdallah Banda (MP, Offinso South):

The Committee deliberated on the urgency of the Bill on the basis of the Memorandum accompanying the Bill and the devastating threats posed by the COVID-19 pandemic ... The Committee has duly considered the urgency of the Bill in the light of the monumental threats posed by the COVID-19 pandemic and the urgent need to pass the Bill to give effect to the

temporary measures announced by the President to combat the pandemic.  
(19 March 2020/Col.237-238)

(2) Dr Mark Assiebey-Yeboah (Chairman, Finance Committee/MP, New Juaben South):  
... the devastating impact of COVID-19 pandemic on revenue performance implies that the national budget is less able to support demand for additional financing toward combatting the COVID-19.

(7 Nov 2020/Col.153)

(3) Dr Bernard Okoe Boye (Deputy Minister for Health/MP, Ledzokuku):  
Ghana's mortality rate, deducing from the statistics, is 0.5 per cent. This means that for every thousand cases of COVID-19, Ghana could record five deaths. Although COVID-19 is regrettable and unfortunate, it is important to note that Ghana's COVID-19 death rate remains one of the lowest in the world. The more efficient the management of COVID19 in the country, the lower the mortality rate. (20 July 2020/Col.006)

In examples 1 and 2, Covid-19 is constructed as posing a devastating and monumental threat and having a devastating impact. The talk of the threat and impact of Covid-19 conceptually and cognitively (cf. Charteris-Black, 2004) perceives Covid-19 as a weapon. Al-Mwzaiji (Al-Mwzaiji, 2021) observes that the coronavirus was considered by some people as a biological weapon, which, in Craig's (Craig, 2020) term can inflict greater and even lethal damage. According to Al Husain (Al Husain, 2020; see also EN MetaNet Wiki, 2013; Wicke and Bolognesi, 2020), the metaphor of weapon is often used in health-related topics, where, for example, treatment is considered as fighting and medical tools represent the armour and weapons of patients. However, we consider the disease itself as a weapon (cf. Semino et al., 2017; Al-Mwzaiji, 2021). Al Husain (Al Husain, 2020) states that the disease itself became "a new weapon to win political battles". The metaphorical weaponisation of diseases has been acknowledged in discourses about diseases (Craig, 2020). Semino et al. (Semino et al., 2017: 62) have noted that, in the case of cancer fighting a patient, "cancer can be described as 'attacking from inside' and 'invading' the body". In the same way, we can describe Covid-19 as 'attacking' and 'invading' Ghana(ians). Constructing Covid-19 in terms of threat, impact and devastation suggests crisis, danger and an emergency, which demands immediate action. A weapon implies destruction and violence. Thus, we can conceptually regard Covid-19 as a weapon (Covid-19 is a weapon), which can be syllogistically explained as:

A weapon is a destroyer/destructive agent.

Covid-19 is a weapon.

Covid-19 is a destroyer/destructive agent.

As a weapon, Covid-19 has targets (victims) to destroy, which are socio-economic and humans, including the destruction of and impact on public gathering, households, businesses, the financial services, employment, job creation, revenue collection, among others, with death being the possible end scenario (cf. Al Husain, 2020). As a weapon, Covid-19 is destroying/killing Ghana(ians) (that is, Ghanaians are victims; see example 3: deaths, death rate and mortality rate). In this sense, Covid-19 can also be considered as an enemy who has declared war against Ghana(ians). Also, the use of a weapon can be considered as an act of war/aggression. Thus, we can generally represent the discussion so far as: Covid-19 is an ENEMY who has declared WAR against us, an invasion, to destroy us and we must FIGHT back (cf. Al Husain, 2020; Chatti, 2021). In the next section, we discuss the concept of the metaphor of war as observed in our data.

### 4.3 The metaphor of war against Covid-19, the enemy

The fight against Covid-19 is metaphorically constructed as a war. The war metaphor portrays Covid-19 as an enemy (as noted earlier), and the enemy must be fought against.

Lakoff and Johnsen (Lakoff and Johnsen, 2003: 266) have noted that a metaphor has “two domains: the target domain, which is constituted by the immediate subject matter, and the source domain, in which important metaphorical reasoning takes place and that provides the source concepts used in that reasoning”. Putting Lakoff and Johnsen’s explanation in our discussion here, we will say that in everyday sense, a war entails enemies, armies/soldiers, armoury/weapons, battlefield, casualties/victims and strategies for executing the war (source domain). If we metaphorically project this entailment/source domain concept onto the fight against Covid-19 (our target domain), we should be able to identify the analogues of the above-mentioned elements of war. In other words, “[c]ertain aspects of the source and those of the target are brought into correspondence with each other in such a way that constituent elements of the source correspond to constituent elements of the target” (Kovecses, 2010: 121). This way, we can consider war as a hostile encounter between two enemies, Ghana and Covid-19. A war demands soldiers (frontline workers, medical personnel) and the soldiers require weapons (medical tools, personal protective equipment (PPE, nose masks, hand sanitisers, vaccine)). Ghana is considered as the battlefield, with casualties/victims being Ghanaians, the economy and social relations. The strategy for executing the war includes creation of a Covid-19 fund to fight the pandemic, quarantine, social distancing, nose masking and other protocols. These are discussed in turn.

Ghana and Covid-19 are enemies at war. As noted in example (4) the country is said to be in abnormal times and that the state needs to fight the Covid-19 pandemic. The implication is that the state is at war, in a hostile encounter, with Covid-19. Covid-19 is constructed as the enemy to fight.

(4) Mr Joe Osei-Owusu (Chairman of Appointments Committee and MP, Bekwai):

The nominee acknowledged that the country is not in normal times and that the State will have to deploy all the forces at its disposal to fight the COVID-19 pandemic.

(20 May 2020/Col.101-104)

By trying to keep Covid-19, the enemy, at bay, the country/state can be conceptualised as a container, as exemplified in (5). Ghana is a container from which Covid-19 must be kept away. The container metaphor captures “the notion of a bounded area protecting what is within from external danger” (Charteris-Black, 2006: 563), or “a spatial containment schema which grounds conceptualizations of one’s country as a closed container that can be sealed or penetrated” (Chilton 2004: 118). The notion of Ghana as a bounded area away from which Covid-19 must be kept is contained in such expressions as (5): the various points and indeed ports of entry – the airports and our seaports, land, sea and air and by road to Ghana, the border at Aflao and route. In one instance, Mr Bedzrah (MP, Ho West) wanted to know what the Ministry of the Interior was doing to protect people who had property across the border so that “they do not contract the virus from across the border into the country” (3 June 2020/Col.012). In this way Covid-19 is seen as an external force that threatens the security of Ghana. The container metaphor has been recognised as being pervasive in political discourse and communication, especially when talking about the security of nations (see Charteris-Black, 2006). The implication is that if the borders are not secured in the war against Covid-19, the country’s security is at risk.

(5) Majority Leader (Mr Osei Kyei-Mensah-Bonsu):

Again, the Hon Minister has indicated to us the preparations they are doing at the various points and indeed ports of entry – the airports and our seaports. In Ghana, those of them who enter the

country by land far outnumber those who come by sea and air.... Mr Speaker, I understand some of the Chinese are dropping in Nigeria and coming by road to Ghana. If that is the truth, then we should also be careful at the border at Aflao and institute measures to ensure that there is no transmission by that route. Mr Speaker, the mingling of immigrants at the border at Aflao sometimes is rather too heavy and that could facilitate the early and easy transmission of the disease.

(4 Feb 2020/Col.065-066)

The container metaphor construes countries as entities which must be protected from penetration and occupation by outsiders by refusing them illegal entry. It, thus, invokes the notion of Covid-19 as a foreign disease being spread by immigrants from China who are crossing borders: some of the Chinese are dropping in Nigeria and coming by road to Ghana and the mingling of immigrants at the border at Aflao ... could facilitate the early and easy transmission of the disease (5). The assumption is that if Ghana loses control of illegal immigration, Covid-19 will penetrate her borders and infect Ghanaians. As noted by Charteris-Black (Charteris-Black, 2006: 576) “the concept of a loss of control can be equated to the perforation of a container and penetration of a bounded area, hence in rhetorical terms loss of control arouses the emotion of fear of external dangers”. It is such representation of fear that moves power bearers into action (cf. Al-Ghamdi, 2021; Chatti, 2021), echoing Tisdall’s (Tisdall, 2020) view that using metaphors of war breeds fear and anxiety, divides communities, compromises democracies, generates a turf war between countries, creates global confrontation and may legitimize the use of actual military actions. To this end, the Minister for the Interior/MP for Lawra noted that the Ghana Immigration Service had “among other actions taken, been sensitising border communities to cooperate to prevent illegal entry” (3 June 2020/Col.008-010). In a study of public discourses around Covid-19, Ivić and Petrović (Ivić and Petrović, 2020) noted that the Covid-19 pandemic had contributed to the rise of xenophobia and discrimination as a result of other people being perceived as a carriers of the disease, thereby portraying Covid-19 as a foreign virus and leading to binary oppositions such as we/they, self/other, citizen/foreigner, among others. Al Husain (Al Husain, 2020) makes a similar observation when coronavirus is seen as a Chinese virus, while Koba (Koba, 2021) notes that the Covid-19 pandemic generated hate-related discourses against Asian Americans, especially the Chinese. Similarly, due to the Covid-19 outbreak, Ghanaian MPs see citizens of other countries through the lens of othering (cf. Ivić and Petrović, 2020; Koba, 2021), which resonates with the view that a war frame usage breeds fear and anxiety and divides communities (Tisdall, 2020; Wicke and Bolognesi, 2020; Chatti, 2021).

Medical personnel and other frontline workers, government and parliament are army/soldiers. As armies and soldiers are the ones mandated to prevent enemies from invading a country (the container), those fighting against the Covid-19 pandemic may be considered as the army or soldiers, that is, the State will have to deploy all the forces at its disposal (example (4)). The expression, the State will have to deploy all the forces at its disposal, is itself metaphorical, where forces has a military strength connotation. The Oxford English Dictionary (OED online) (Oxford English Dictionary, 2021, see also Microsoft Encarta Dictionary, 2009) defines forces as the troops or soldiers composing the fighting strength of a kingdom or of a commander in the field; a body of police or policemen considered collectively; a group organised to fight; a group of people working together for a particular purpose; or the power and might of the state, etc. Deploying all the forces against Covid-19 means using all the available resources, medical personnel and other frontline workers, etc., to fight against the disease. Frontline workers, which became a jargon during the outbreak of Covid-19, was defined by Parliament as “any health worker who has been involved in the management of a confirmed case of COVID-19” (20 July 2020/Col.017-018). The frontline workers can, therefore, be considered in military terms as the commanders in the field (cf. OED, 2021), as, for example, Britain’s chief medical advisor being

described as the “the ‘man with our lives in his hands’” (Tisdall, 2020: n.p.) and healthcare professionals, especially nurses, around the world willing to risk their lives to save others described as superheroes (Einboden, 2020) and warriors (Craig, 2020).

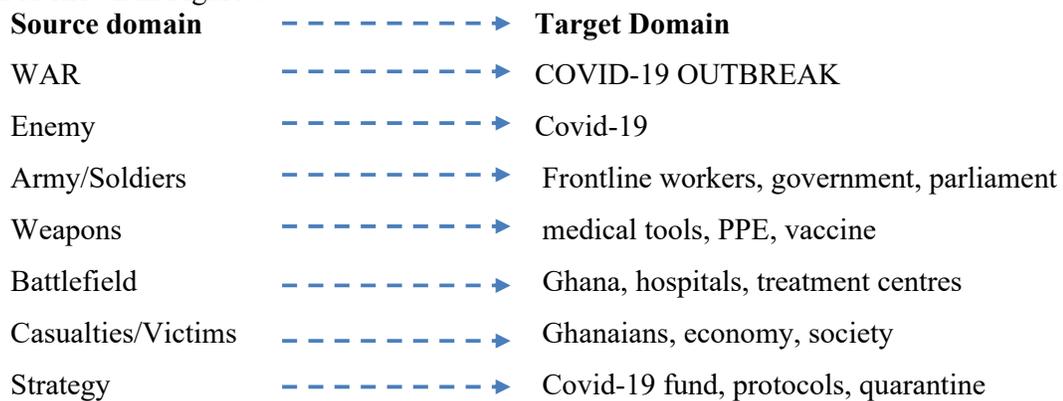
Medical equipment/tools are weapons. In the physical world, armies/soldiers require weapons (cf. Al Husain, 2020) to be able to successfully engage in a war. As part of the means of dealing with the pandemic, the Government of Ghana established a fund known as the Covid-19 Emergency Response Fund, part of which was to be used to procure additional PPEs [personal protective equipment] and medical equipment, and to equip testing centres and prepare treatment centres for the COVID-19 patients and to revamp emergency and critical care units in existing hospitals to expand capacity to deal with any upsurge in the virus (7 Nov 2020/Col.156). Weaponisation as part of the metaphor of war discourse around Covid-19 has been recognised in the literature (Al Husain, 2020; Ivić and Petrović, 2020; Nor and Zulcafli, 2020; Wicke and Bolognesi, 2020; Chatti, 2021), which affirms the commonalities in the global discourses around the pandemic. The metaphor of weapon evokes utility, protection, defence and battle readiness, in the sense in which the presence and attention of medical officers around a patient brings respite to the patient. At the peak of the outbreak of the Covid-19 pandemic, Mahubani (Mahubani, 2020) described the choices made by doctors as to which patient to give medical attention as reminiscent of the choices made on a battlefield.

Ghana, hospitals, treatment centres are battlefields. In the war between Ghana and Covid-19, Ghana is considered as the battlefield, which either of the two wants to take control of. While Covid-19 threatens to take over Ghana and kill everybody, the soldiers are trying to keep it in check. Dr Assibey-Yeboah notes that “[p]art of the facility will also be applied to revamp emergency and critical care units in existing hospitals to expand capacity to deal with any upsurge in the virus”. In healthcare circles, battle and battlefield metaphors are said to be common linguistic resources used to describe the struggles patients go through as they fight or battle various illnesses (Reisfield and Wilson, 2004; Potts and Semino, 2017). Often, the body is seen as the battlefield in the fight against cancer, suggesting the presence of the disease inside the patient’s body (Semino et al., 2017). The battle/battlefield metaphor connotes violence, where the disease violently fights the patient’s body. Similarly, while the battlefield metaphor indicates the struggle Ghana (led by frontline workers) is going through to respond to the threat posed by Covid-19, hospitals and treatment centres are considered as the battlefield where Covid-19 is engaged in a battle to protect the potential casualties or victims of the Covid-19 attack.

Ghanaians, the economy and social relations are casualties/victims. The casualties/victims of the Covid-19 war are Ghanaians, the economy and social relations, as, for example, the needy and vulnerable persons (example 6). Between January 2020 and December 2020, the period covered by the data for this research, Ghana recorded 54,286 cases with 333 deaths (World Health Organisation, 2020) and about 946 active cases (Myjoyonline, 2020). And as of today 18th May 2021, Ghana has 93,390 cases, 91,200 recoveries, about 1,308 active cases and 783 deaths (World Health Organisation, 2021). The pandemic has also had serious economic consequences for Ghana. According to Aduhene and Osei-Assibey (Aduhene and Osei-Assibey, 2021) within the first two months of the outbreak of Covid-19 in Ghana, an estimated 42,000 people lost their jobs, with the tourism and hospitality sector alone losing \$171 million dollars in three months and the healthcare system being overwhelmed by the number of increasing cases. In the budget statement and economic policy of the Government of Ghana for the 2021 financial year, the Minister of Finance stated that the outbreak of the pandemic led to “a sudden shortfall in Government revenues amounting to GH¢13.6billion” and “an unexpected and unavoidable rise in expenditures of GH¢11.7billion”, with the International Monetary Fund (IMF) stating that the COVID-19 pandemic had upended the economies of over 150 countries and was the worst economic crisis since the Great Depression in the 1930s (Ministry of Finance, 2021). The advent of Covid-19 broke social relations. The Imposition of Restrictions Act, 2020 (Act 1012) gave

the President of Ghana the power to impose certain restrictions and other measures by an Executive Instrument intended to stop the importation of the virus and to contain its spread. The social and physical distancing protocols and the wearing of nose masks affected the way Ghanaians socially related. It affected the greeting culture of Ghanaians as they could not shake hands anymore (handshaking is/was a well-cherished Ghanaian way of greeting). The pandemic led to the Government of Ghana suspending and/or closing all public gatherings, including conferences, workshops, funerals, festivals, political rallies, sporting events and religious activities, universities, senior high and basic schools (cf. Aduhene and Osei-Assibey, 2020). This is similar to what Al Husain (Al Husain, 2020) notes happened in other places around the world. The creation of a Covid-19 fund, quarantine, social distancing, nose masking and other protocols are strategies. Winning a war demands well-planned and well-executed strategies. To contain the spread of the Covid-19 pandemic, the Government of Ghana outlined and implemented several strategies. This included the establishment of the Coronavirus (COVID-19) National Trust Fund to complement the efforts of Government in the fight against COVID-19 (2 April 2020/Col.212), the Imposition of Restrictions Act, 2020 (Act 1012) ... to impose certain restrictions and several other measures such as the declaration of COVID – 19 as a public health emergency, the closure of our borders, mandatory quarantine for fourteen days, testing of persons who entered the country from 2nd March, 2020, and the treatment of persons who tested positive for COVID–19 and other restrictions of movement of persons, including a partial lockdown (2 April 2020/Col.024-025).

The foregoing discussion can be conceptually represented in a mapping of source-target domain as shown in Figure 3.



**Fig. 3** Source and target

The mapping of source-target domain is similar to those found by Al Husain (Al Husain, 2020), Ivić and Petrović (Ivić and Petrović, 2020), Nor and Zulcafli (Nor and Zulcafli, 2020), Wicke and Bolognesi (Wicke and Bolognesi, 2020), Chatti (Chatti, 2021) and Luporini (Luporini, 2021), which demonstrates similar metaphors and descriptions of the pandemic across the globe.

## **Conclusion**

This paper sought to examine the metaphorical conceptualisation of the Covid-19 pandemic in Ghanaian parliamentary discourse, a leading African democracy. The analysis and discussion shows that, in the discourses of parliamentarians, the Covid-19 pandemic is metaphorically conceptualised as an enemy that needs to be fought against. The pandemic is also conceptualised as a weapon that poses a huge threat to the Ghanaian society. The fight against Covid-19 is metaphorically construed as a war. And being a war entails several constituent elements without which the war will be unsuccessful. These include the soldiers of the war (medical workers, frontline workers, government, parliament), who need weapons (medical tools, PPE, vaccine) to

battle Covid-19 on the battlefield (Ghana, hospitals, treatment centres) to avoid/reduce the number of casualties/victims (Ghanaians, economy, society) by putting in place certain strategies (creation of a Covid-19 fund, protocols, quarantine). In the overall discussion, the following conceptual metaphors were identified, namely: Covid-19 is an enemy, a threat, a crisis; Covid-19 is a weapon; Ghana is a container; Covid-19 is a war. These are similar to the findings of other studies such as Al Husain (Al Husain, 2020), Ivić and Petrović (Ivić and Petrović, 2020), Nor and Zulcafli (Nor and Zulcafli, 2020), Wicke and Bolognesi (Wicke and Bolognesi, 2020) Chatti (Chatti, 2021) and Luporini (Luporini, 2021) who found comparable conceptualisations of the Covid-19 pandemic. These similarities point to how studies of discourses of different cultures’ experiences of the same or similar phenomenon can lead to an understanding of the universality (or otherwise) of metaphors in particular and languages in general.

The study contributes to the ongoing discourses aimed at understanding the global experience of the Covid-19 pandemic as well as an understanding that aspects of metaphor that reflect natural kinds of experience may be universal (see Lakoff and Johnsen, 2003; Kovecses, 2010). The implication is that the description of the same natural occurrences across the world can contribute to our understanding of how similarly or differently people experience the same phenomenon across cultures and how human feelings and language are related or unrelated.

## References

- Aduhene, D. T., and Osei-Assibey, E. (2021). “Socio-economic impact of COVID-19 on Ghana's economy: challenges and prospects”. *International Journal of Social Economics*, 48(4), 543-556.
- Afriyie, D. K., Asare, G. A., Amponsah, S. K., and Godman, B. (2020). “COVID-19 pandemic in resource-poor countries: challenges, experiences and opportunities in Ghana”. *Journal of Infection in Developing Countries*, 14(8), 838-843. Doi:10.3855/jidc.12909.
- Al-Ghamdi, N. (2021). “Ideological representation of fear and hope in online newspaper reportson COVID-19 in Saudi Arabia”. *Heliyon*, 7(4), e06864.
- Al Husain, M. A. (2020). “The metaphorical modeling of COVID-19 pandemic crisis in Infosphere online news articles”. *Journal of Education College Wasit University*, 1(40), 655-672.
- Almazán-Ruiz, E., and Orrequia-Barea, A. (2020). “The British press’ coverage of coronavirus threat: A comparative analysis based on corpus linguistics”. *Çankaya University Journal of Humanities and Social Sciences*, 14(1), 1-22.
- Al-Mwzaiji, K. N. A. (2021). “The political spin of conviction: A critical discourse analysis of the origin of Covid-19”. *GEMA Online Journal of Language Studies*, 21(1), 239-252.
- Alon, T. M., Kim, M., Lagakos, D., and Van Vuren, M. (2020). How should policy responses to the covid-19 pandemic differ in the developing world?. Working Paper No. 27273. Cambridge: National Bureau of Economic Research. [https://www.nber.org/system/files/working\\_papers/w27273/w27273.pdf](https://www.nber.org/system/files/working_papers/w27273/w27273.pdf).
- Baker, P. (2010). “Corpus methods in linguistics”. In: Litosseliti, L. ed 2010. *Research Methods in Linguistics*. London: Continuum International Publishing Group. Pp. 93-113.
- Bischetti, L., Canal, P., and Bambini, V. (2021). “Funny but aversive: a large-scale survey of the emotional

- response to Covid-19 humor in the Italian population during the lockdown”. *Lingua*, 249.  
<https://doi.org/10.1016/j.lingua.2020.102963>.
- Charteris-Black, J. (2004). *Corpus Approaches to Critical Metaphor Analysis*. Basingstoke: Palgrave Macmillan.
- Charteris-Black, J. (2006). “Britain as a container: Immigration metaphors in the 2005 election campaign”. *Discourse & Society*, 17(5), 563-581.
- Chatti, S. (2021). “Military framing of health threats: the Covid-19 disease as a case study”. *Language, Discourse & Society*, 9(1), 33-44.
- Chen, C-M. (2020). “Public health messages about COVID-19 prevention in multilingual Taiwan”. *Multilingua*, 39(5), 597-606.
- Chilton, P. (2004). *Analysing Political Discourse*. London and New York: Routledge.
- Clark, T., Spiby, R., and Tasviri, R. (2020). “Crisis, collaboration, recovery: IELTS and COVID-19”. *Language Assessment Quarterly*, <https://doi.org/10.1080/15434303.2020.1866575>.
- Craig, D. (2020). “Pandemic and its metaphors: Sontag revisited in the Covid-19 era”. *European Journal of Cultural Studies*, 23(6), 1025-1032.
- Dong, E., Du, H., and Gardner, L. (2020). “An interactive web-based dashboard to track COVID-19 in real time”. *The Lancet Infectious Diseases*, 20(5), 533-534.
- Einboden, R. (2020). “SuperNurse? Troubling the hero discourse in COVID times”. *Health*, 24(4): 343-347.
- EN MetaNet Wiki. (2013). “Metaphor: disease treatment is war”. Accessed 27 April 2021.  
[https://metaphor.icsi.berkeley.edu/pub/en/index.php?title=Metaphor:DISEASE\\_TREATMENT\\_IS\\_WAR&oldid=964](https://metaphor.icsi.berkeley.edu/pub/en/index.php?title=Metaphor:DISEASE_TREATMENT_IS_WAR&oldid=964).
- Essam, B. A., and Abdo, M. S. (2020). “How do Arab tweeters perceive the COVID-19 pandemic?”. *Journal of Psycholinguistic Research*, 50, 507-521. <https://doi.org/10.1007/s10936-020-09715-6>.
- Gilbert, M., Pullano, G., Pinotti, F., Valdano, E., Poletto, C., Boëlle, P-Y., D’Ortenzio, E., Yazdanpanah, Y., Altmann, M., Gutierrez, B., and Kraemer, M., (2020). “Preparedness and vulnerability of African countries against importations of COVID-19: a modelling study”. *Lancet*. 395, 871-877.  
Doi:10.1016/S0140-6736(20)30411-6.
- Goatly, A. (2007). “Metaphor and ideology”. *Ilha do Desterro A Journal of English Language, Literatures in English and Cultural Studies*, 53, 063-094.
- Government of Ghana. (2020a). “Outbreak of novel coronavirus infection (2019-nCoV) in China”. Accessed 10 March 2021. <https://www.modernghana.com/news/980535/outbreak-of-novel-coronavirus-infection-2019-ncov.html>.
- Government of Ghana. (2020b). “For immediate Release: Ghana confirms two cases of Covid-19”. Accessed 10 March 2021.  
[https://ghanahealthservice.org/covid19/downloads/covid\\_19\\_first\\_confirmed\\_GH.pdf](https://ghanahealthservice.org/covid19/downloads/covid_19_first_confirmed_GH.pdf)
- Green, B. A., and Lung, Y. S. M. (2020). “English language placement testing at Brigham Young University–Hawaii in the time of COVID-19”. *Language Assessment Quarterly*, 18(1).  
<https://doi.org/10.1080/15434303.2020.1863966>.
- Ivić, S., and Petrović, R. (2020). “The rhetoric of othering in a time of pandemic: Labeling Covid-19 as ‘a foreign virus’ in public discourse”. *Kultura Polisa*, 43, 421-433.

- Kwabena Sarfo Sarfo-Kantankah et al. “Metaphorical conceptualisation of Covid-19 in parliamentary discourse: A corpus-assisted study”
- Joharry, S. A., and Turiman, S. (2020). “Examining Malaysian public letters to editor on COVID- 19 pandemic: a corpus-assisted discourse analysis”. *GEMA Online Journal of Language Studies*, 20(3), 242-260. <http://doi.org/10.17576/gema-2020-2003-14>.
- Koba, A. (2021). “Discursive othering of Asian Americans: a preliminary reflection of a foreshadowing COVID-19 related hate. *Language, Discourse & Society*, 9(1), 15-32.
- Kovecses, Z. (2010). *Metaphor: A Practical Introduction* (2nd ed.). Oxford: Oxford University Press.
- Kumar, A., and Somani, A. (2020). Dealing with Corona virus anxiety and OCD”. *Asian Journal of Psychiatry*, 51, 102053.
- Lakoff, G., and Johnson, M. (1980). *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lakoff, G., and Johnsen, M. (2003). *Metaphors We Live By*. London: The University of Chicago Press.
- Louw, B. (2000). “Contextual prosodic theory: bringing semantic prosodies to life”. In: Heffer, C., Sauntson, H., and Fox, G. eds 2000. *Words in Context: A tribute to John Sinclair on his Retirement*. Birmingham: University of Birmingham. Pp. 48-94.
- Luporini, A. (2021). “Metaphor, nominalization, appraisal: analyzing coronavirus-related headlines and subheadings in China Daily and the Wall Street Journal”. *GEMA Online Journal of Language Studies*, 21(1), 253-273.
- Mahbubani, R. (2020). “How Italy spiralled from a perfectly healthy country to near collapse in 24 days as the coronavirus took hold”. *Business Insider*. Retrieved 15 May 2020. <https://www.businessinsider.com/italy-falling-apart-coronavirus-pandemic-doctors-tough-choices-2020-3>.
- Marler, H., and Ditton, A. (2021). “‘I’m smiling back at you’: exploring the impact of mask wearing on communication in healthcare”. *International Journal of Language Communication Disorders*, 56(1), 205-214.
- McEnery, T., and Hardie, A. (2012). *Corpus Linguistics: Method, Theory and Practice*. Cambridge: Cambridge University Press.
- Microsoft Encarta Dictionaries. (2009). 1993-2008 Microsoft Corporation.
- Ministry of Finance. (2021). “The budget statement and economic policy of the government of Ghana for the 2021 financial year”. <https://www.mofep.gov.gh/sites/default/files/news/2021-Budget-Statement.pdf>.
- Mukumbang, F. C. (2020). “Are asylum seekers, refugees and foreign migrants considered in the COVID-19 vaccine discourse?” *BMJ Global Health*, 5(11).
- Muñoz, A. M.Á., Díaz, I. C. S., and Ibáñez, E. T. (2020). “A lexical-cognitive approach to the influence of the media on the perceptions of Spanish university students regarding COVID-19”. *Círculo de Lingüística Aplicada a la Comunicación*. <http://dx.doi.org/10.5209/clac.70701>.
- Myjoyonline. (2020). “Full text: Akufo-Addo’s 20th address on updates to fight Covid-19”. Accessed 18 May 2021. <https://www.myjoyonline.com/full-text-akufo-addos-20th-address-on-updates-to-fight-covid-19/>.
- Nor, F. M. and Zulcafli, A. Z. (2020). “Corpus driven analysis of news reports about Covid-19 in a Malaysian online newspaper”. *GEMA Online Journal of Language Studies*, 20(3),199-220.
- Ockey, G. J., Muhammad, A. A., Prasetyo, A. H., Elnegahy, S., Kochem, T., Neiriz, R., Kim, H., and Beck, J. (2020). “Iowa State University’s English placement test of oral communication in times of COVID-19”. *Language Assessment Quarterly*, 18(1). <https://doi.org/10.1080/15434303.2020.1862122>.

- Oxford English Dictionary (OED) Online. August 2020. Oxford University Press. Accessed: 19 August 2020. <https://www.oed.com/view/Entry/128094?rskey=k3gAex&result=1#eid>.
- Partington, A. (2004). "Utterly content in each other's company: Semantic prosody and semantic preference". *International Journal of Corpus Linguistics*, 9(1), 131-156.
- Piller, I., Zhang, J., and Li, J. (2020). "Linguistic diversity in a time of crisis: Language challenges of the COVID-19 pandemic". *Multilingua*, 39(5), 503-515.
- Potts, A., and Semino, E. (2017). "Healthcare professionals' online use of violence metaphors for care at the end of life in the US: a corpus-based comparison with the UK". *Corpora*, 12(1), 55-84.
- Prajapat, M., Sarma, P., Shekhar, N., Avti, P., Sinha, S., Kaur, H., and Medhi, B. (2020). "Drug targets for corona virus: A systematic review". *Indian journal of pharmacology*, 52(1), 56.
- Raga, S., and Velde, D. W. (2020). "Economic vulnerabilities to health pandemic: which countries are most vulnerable to the impact of coronavirus". <https://set.odi.org/wp-content/uploads/2020/02/File-All.pdf>.
- Reisfield, G. M., and Wilson, G. R. (2004). "Use of metaphor in the discourse on cancer". *Journal of Clinical Oncology*, 22, 4024-4027.
- Sardinha, T. B. (2020). "Tracking discourses around the coronavirus pandemic". *De Lingüística Computacional Y De Corpus*, 28.
- Scott, M. (2012). *Wordsmith Tools Version 6*. Liverpool: Lexical Analysis Software.
- Semino, E., Demjén, Z., Demmen, J., Koller, V., Payne, S., Hardie, A., and Rayson, P. (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.
- Shymko, V., and Babadzhanova, A. (2020). "Study of the Covid-19 related quarantine concept as an emerging category of a linguistic consciousness". *Psycholinguistics*, 28(1), 267-287. Doi: 10.31470/2309-1797-2020-28-1-267-287.
- Singleton, M. N., and Soffin, E. M. (2020). "Daring discourse: are we ready to recommend neuraxial anesthesia and peripheral nerve blocks during the COVID-19 pandemic? A pro-con". *Regional Anesthesia & Pain Medicine*, 45(10), 831-834.
- Skott, C. (2002). "Expressive metaphors in cancer narratives". *Cancer Nursing: An International Journal of Cancer Care*, 25, 230-235.
- Sontag, S. (1978). *Illness as Metaphor*. New York: Farrar, Straus and Giroux.
- Sontag, S. (1989). *AIDS and its Metaphors*. New York: Farrar, Straus and Giroux.
- Tisdall, S. (March 21, 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>.
- Van Leeuwen, T. (2008). *Discourse and Practice: New Tools for Critical Discourse Analysis*. Oxford and New York: Oxford University Press.
- Wicke, P., and Bolognesi, M. M. (2020). "Framing COVID-19: how we conceptualize and discuss the pandemic on Twitter". *PLoS ONE*, 15(9). <https://doi.org/10.1371/journal.pone.0240010>.
- World Health Organisation. (2020). "COVID-19 weekly epidemiological update". Accessed 18 May 2021 <https://www.who.int/publications/m/item/weekly-epidemiological-update-29-december-2020>.
- Wulff, S., and Baker, P. (2020). "Analyzing concordances". In: Paquot, M. and Gries, S. Th. Eds 2020. A

Kwabena Sarfo Sarfo-Kantankah et al. “Metaphorical conceptualisation of Covid-19 in parliamentary discourse: A corpus-assisted study”

Practical Handbook of Corpus Linguistics. e.Book: Springer Nature Switzerland. Pp. 161-180.

Xue, J., Chen, J., Chen, C., Zheng, C., Li, S., and Zhu, T. (2020). “Public discourse and sentiment during the COVID 19 pandemic: using latent dirichlet allocation for topic modeling on Twitter”. PLoS ONE, 15(9).

<https://doi.org/10.1371/journal.pone.0239441>.

Zhang, J., and Wu, Y. (2020). “Providing multilingual logistics communication in COVID-19 disaster relief”. *Multilingua*, 39(5), 517-528.

Zhu, H. (2020). “Countering COVID-19-related anti-Chinese racism with translanguaged swearing on social media”. *Multilingua*, 39(5), 607-616.