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Incorporating cross-linguistic and time-based dimensions to Critical Metaphor Analysis: a specialised hands-on analytical approach

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ABSTRACT

Critical Metaphor Analysis (CMA) regards metaphor as a fundamental means of conceptualising the world, through which the ideology embedded in discourse can be unveiled. Drawing upon the methodologies of Critical Discourse Analysis and Corpus Linguistics, CMA comprises four principle stages: initially, contextual analysis for formulating research questions and selecting texts, followed by metaphor identification, interpretation, and explanation. This schematic four-stage CMA has found widespread applications in analyses of sensitive discourses, particularly political discourses. This study builds upon these schematic four stages, putting forward a more specialised, hands-on analytical approach that is well suited for a range of research objectives in translation and bi/multilingual settings where both cross-linguistic and time-based perspectives can be considered. To provide a step-by-step guide of this cross-linguistic and time-based analytical approach, this study presents two case studies of the Chinese newspaper *Global Times*' Chinese-English bilingual COVID-19 reports in 2020. Specifically, metaphor translation and a time series analysis of the attitudinal intensity (strengthening, weakening, or keeping the negativity towards the pandemic unchanged) as manifested through the translation of WAR metaphors were explored. The study concludes by suggesting the application of this analytical approach to other types of metaphor correspondence and time-based analyses.

Introduction

Plenty of research has been dedicated to analysing the metaphorical representations of social realities in discourse. This interest largely stems from the confluence of Conceptual Metaphor Theory (CMT, Lakoff & Johnson, 2008), which posits metaphors as pervasive conceptual tools, and Critical Discourse Analysis (CDA, Fairclough, 1995), which associates

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language with power and ideology. While some scholars examine metaphors and their association with power and ideology without explicit reference to CDA (e.g. Goatly, 2006; Kitis & Milapides, 1997), many others follow Charteris-Black (2004) in combining CDA with CMT, employing Critical Metaphor Analysis as their analytical framework (e.g. Atanasova, 2018; Nartey, 2019; Zibin, 2020, etc.). Likewise, scholars such as Hart (2008) and Musolff (2012) also promote the inclusion of metaphor analysis in Critical Discourse Analysis, though their endorsement is more theoretical than methodological.

Despite their varied explicit and implicit approaches to a critical study of metaphors, these studies apply metaphor analysis as a significant critical discourse analytical tool across various text types, including reconciliation talks (Cameron, 2011), political speeches (Charteris-Black, 2018), newspapers (Zibin, 2020), and blogs (Atanasova, 2018). Meanwhile, there is a burgeoning trend to explore cross-linguistic differences and temporal dynamics of metaphor use. This is because scholars notice the role metaphor plays in intercultural communication (Kövecses, 2005; Musolff et al., 2014), as well as its affordance in analysing diachronic corpora of discourses (Taylor, 2022). Some scholars also directly advocate for incorporating a cross-linguistic perspective in (critical) discourse analyses (Taylor, 2014) and considering the time variable in critical discourse research (Tay, 2021a). Nevertheless, there still lacks a hands-on analytical approach that can encompass these attempts in a transparent, well-organised and replicable manner. Moreover, there appears to lack a multifaceted approach, as studies usually do not adequately explore the diverse possibilities of cross-linguistic and time-based metaphor patterns. For instance, while it is widely acknowledged that metaphorical representations of the same world event may vary across languages due to the diverse socio-political beliefs embedded in each language (Kövecses, 2005), few studies distinguish whether the producers of texts in different languages are different or the same. In fact, most studies in Critical Metaphor Analysis focus on discourses produced by different social agents rather than the same agents (e.g. Lu & Yu, 2023). Similarly, most time-based metaphor analyses focus on diachronic variations (Charteris-Black, 2021; Taylor, 2022), with less attention given to autocorrelations between successive metaphor usages (see Tay, 2019 for an exception). In fact, all these possibilities are worth exploring, as shown in our previous works that analysing cross-linguistic differences by the same or different text producer(s) can further reveal their ideologies (Liu & Li, 2022); and discourse can be strategically constructed through patterned use of metaphors over time, whether in an autocorrelated fashion or not (Liu & Tay 2023). To accommodate efforts such as these with a specialised, hands-on analytical approach applicable to researchers exploring translation and bi/multilingual contexts as well as the discourse dynamics over time, the present study incorporates both cross-linguistic and time-based perspectives to Charteris-Black's (2004, 2018) Critical Metaphor Analysis. Adjustments are made to the four principle stages of CMA, rendering it more specialised for the above-mentioned research scenarios. Furthermore, two case studies are presented to clarify the rationale and steps involved in considering both dimensions. The objective is to furnish scholars working on bi/multilingual and translation issues as well as diachronic sociolinguistic variations with a practical analytical toolkit that is multi-faceted, replicable, and transparent.

In the subsequent sections, we will first introduce Critical Metaphor Analysis, followed by presenting the specialised cross-linguistic and time-based analytical approach of CMA. Two case studies are then provided to illustrate the application of this analytical approach,

focusing on the use of metaphors in the Chinese newspaper *Global Times*'s Chinese-English bilingual COVID-19 news reports in 2020. After a discussion of the adjusted analytical approach and the two case studies, the study concludes by summarising key findings, and providing suggestions for future research.

Critical Metaphor Analysis

By its definition, Critical Metaphor Analysis aims to 'identify *which* metaphors are chosen in persuasive genres such as political speeches, party political manifestos or press reports' and to 'explain *why* these metaphors are chosen, with reference to the interaction between an orator's purposes and a specific set of speech circumstances' (Charteris-Black, 2018, p. 217, italics original). It integrates Cognitive Linguistics, pragmatics approaches to metaphor, Critical Discourse Analysis and Corpus Linguistics. This comprehensive approach allows for understanding 'what is suppressed by a metaphor (as well as what is highlighted by it)'. It also enables to '*challenge* the metaphor' and propose 'an *alternative* way of thinking about the topic' through an investigation of metaphors in large corpora of authentic language (Charteris-Black, 2004, p. 251).

CMA has four principle stages (see Charteris-Black, 2018, p. 218 Figure 9.1)[1] below. Stage 1 is a contextual analysis where research questions about metaphor are developed based on an observation of its potential impact in social and political contexts. Typical examples include the representation of vulnerable social groups or policies via a systematic use of metaphors. Specific questions formulated will determine the data to be collected and analysed.

Stage 2 is the identification of metaphors, which mainly entails two steps: first, to decide 'what to count as a metaphor' by analysing words and phrases in the dataset (Charteris-Black, 2018, p. 218, italics original); second, to group metaphors into preliminary categories, such as conventional, novel and entrenched metaphors. In this process, analysts can resort to dictionaries and corpora.

Stage 3 is the interpretation of metaphors, focusing on classifying, organising and arranging metaphors. Specifically, it involves identifying the source domain and target domain of metaphors and interpreting the patterns based on which meanings, representations and evaluations conveyed by the text producer are unveiled.

Stage 4 is the explanation of metaphors, where the purposes of metaphor use are examined within the broader social and political context. It is required to evaluate whether and how such metaphor use influence an audience, particularly the role metaphors play in shaping, consolidating or altering opinions and beliefs.

Stages 2–4 are borrowed from Fairclough's (1995) three-stage Critical Discourse Analysis, that involves describing, interpreting and explaining textual, discursive and social practices. The four stages are recursive, which allows flexibility for analysts to modify research questions, metaphor interpretations and metaphor explanations based on ongoing reflections. Charteris-Black (2004) also illustrated how this four-stage analysis could be applied to political discourse, press reporting, financial reporting, and religious discourse. Scholars follow suit by applying CMA to analyse metaphorical representations of certain social groups, e.g. Syrian refugees in Jordanian politico-economic discourse (Zibin, 2020), political events, e.g. the Western Balkans' accession to the European Union (Babić et al., 2023), or social issues, e.g. obesity in personal and professional blogs (Atanasova, 2018).

A specialised cross-linguistic and time-based analytical approach of CMA

Despite the applicability of CMA to various discourse types, studies mentioned above usually concentrate on analysing metaphor use in homogenous texts, typically in the same language, leaving cross-linguistic differences less investigated. In contrast, metaphor use across cultures and languages was more widely studied in other linguistic research fields, including Intercultural Communication and Translation Studies (see Musolff et al., 2014). While these studies highlight the significance of studying metaphors in a bi/multilingual, intercultural and translation setting, they barely adopt a critical analytical approach but focus more on the process and product of metaphor translation. Even among the limited number of studies that analyse cross-linguistic differences from a critical analytical perspective, they often focus on texts from different producers, such as comparing the British versus Italian press (Taylor, 2014), and the Chinese versus American press (Lu & Yu, 2023). However, even the same text producer may present the same social event differently for readers speaking different languages (Liu & Li, 2022).

On the other hand, the temporal dynamics of metaphor use have been increasingly studied in CMA, given the significant role that time plays in shaping social interactions and experiences. Example studies include the varied representations of bisexuality in a 60-year span (Wilkinson, 2019), WATER metaphor in migration discourse over time (Taylor, 2022), and the lexical field of WAR/FIRE/FORCE OF NATURE metaphors in the British press over the duration of the COVID-19 pandemic (Charteris-Black, 2021). Moreover, another type of temporal dynamics involves autocorrelations of the observed metaphor use over time, where the strategic construal of discourse is examined using Time Series Analysis (TSA) (see Tay, 2019 for the rationale of introducing TSA to CDA). TSA is a recently introduced yet significant data analytical tool for discourse analysis (Tay, 2024). The most commonly used TSA method is the Box–Jenkins method (Box et al., 2015), which models the correlation between successive values of a series using Autoregressive Integrated Moving Average (ARIMA) models.

To conclude, although researchers in Intercultural Communication, Translation Studies, Sociolinguistics, and (Critical) Discourse Analysis have increasingly recognised the importance of cross-linguistic and time-based perspectives in (critical) metaphor analysis, there still lacks a transparent and multi-faceted analytical approach that is well-suited for various research purposes in these domains. To fill this gap, the current study will introduce a specialised hands-on analytical approach that is adapted from the four stages of Critical Metaphor Analysis. It considers various forms of cross-linguistic and time-based analyses, including the examination of bi/multilingual texts from both the same and different producers, the exploration of metaphor use over time alongside the actual unfolding of events, and a time series analysis investigating autocorrelations of these metaphors over time. Each of these unveils a different means of discourse construction, offering a unique contribution to the understanding of social realities.

Figure 1 below showcases the four principle stages of this specialised cross-linguistic and time-based analytical approach of CMA. In Stage 1 – Contextual Analysis, the formulation of research questions involves an assessment of metaphor correspondence across languages and time spans within the datasets. If no metaphor correspondences and/or no time spans are observed, analysts can directly follow the steps outlined in the original CMA (see Section Critical Metaphor Analysis above).
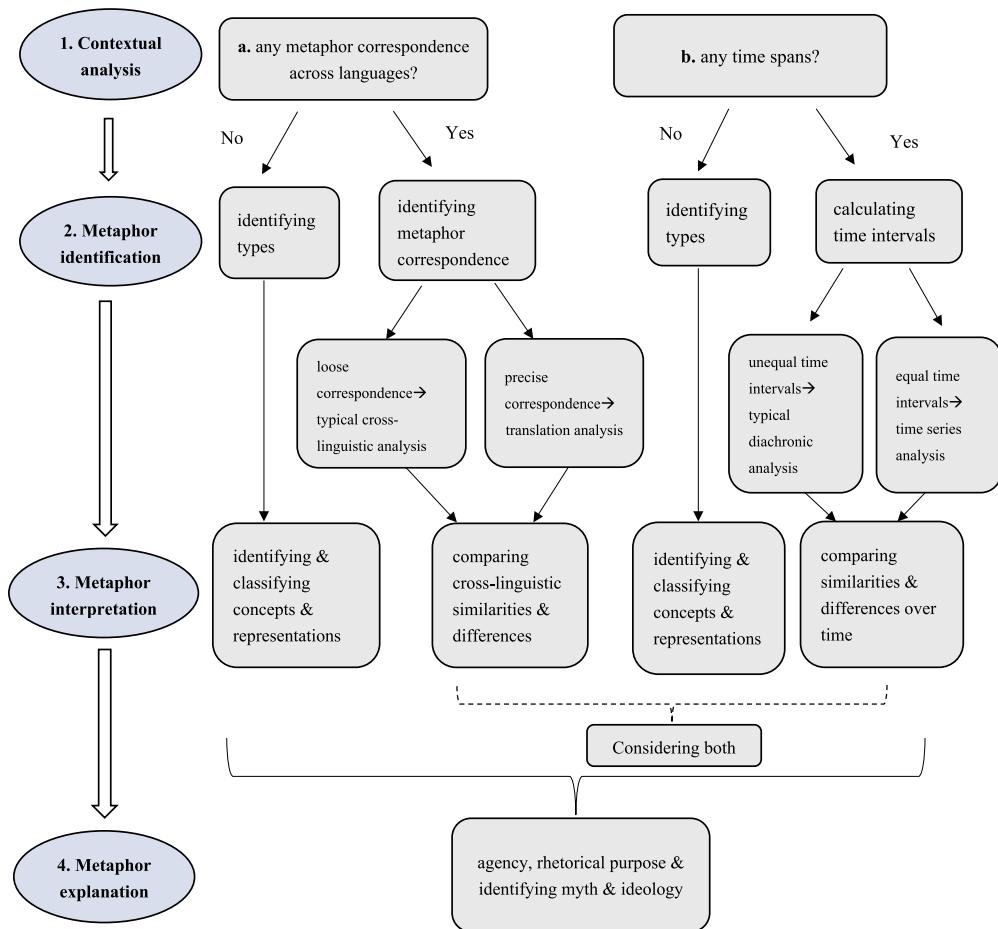
Figure 1. Principle stages of a specialised cross-linguistic and time-based analytical approach of CMA.

If there are one-to-one metaphor correspondences between languages, then in Stage 2 – Metaphor Identification, the analysis can focus on identifying metaphor correspondence. Metaphor correspondence can be defined in two ways: first, as a loose correspondence of metaphors describing the same topic in different language texts (see Taylor, 2014); second, as a precise correspondence of metaphors between the source text (ST) and the target text (TT) in translation practices (see Liu & Li, 2022; Liu & Tay, 2023). In the former, metaphors are not necessarily from the same text producer, and they can be congruent, alternative, preferential and unique (Kövecses, 2005). Conversely, in the latter, metaphors are from the same text producer and strictly follow certain translation relationships: translating the original metaphor into the same metaphor (M-M), replacing the original metaphor with a different metaphor (M1-M2), paraphrasing the metaphor into a non-metaphorical expression (M-P), translating a non-metaphorical expression into a metaphor (P-M), omitting the metaphor (M-0), creating a metaphor from a zero-element (0-M) (See Toury, 2012). In Stage 3 – Metaphor Interpretation, analysts can focus on interpreting cross-linguistic similarities and/or differences – specifically, how the same topic is framed using similar or different metaphors by the same or different text producer(s).

If time spans are observed in Stage 1, then in Stage 2, analysts consider examining metaphor use across time, with two possible scenarios: first, metaphor use across unequal time intervals, typically in relation to the actual unfolding of social events; second, metaphor use across equal time intervals, often revealing potential autocorrelations of metaphor use. The former constitutes a typical diachronic observation of metaphor use, while the latter usually requires a time series analysis (see Tay, 2019 for elaboration). In Stage 3, the interpretation involves an examination of similarities and differences in metaphor use across time intervals. Importantly, in some cases, both cross-linguistic and time-based patterns can be observed. Therefore, analysts can concurrently follow the procedures for each to unveil more nuanced discoveries.

Stage 4 – Metaphor Explanation retains its core focus, namely the examination of metaphor use (whether across languages or over time) within the broader social and political context. This stage often involves evaluating its impact on the audience. Similarly, the four stages are not strictly sequential but are recursive, allowing for potential modifications throughout the analytical process.

To illustrate the practicality and effectiveness of this specialised analytical approach for researchers engaged in translation and bi/multilingual studies, we provide two case studies below. These studies analyse bilingual COVID-19 news reports from *Global Times*, with each one shedding light on one of the two critical dimensions under investigation: cross-linguistic comparisons and time-based variations.

Case studies of the *Global Times*'s COVID-19 reports

Given that the COVID-19 pandemic is a crucial health, social and political matter with a substantial global impact (Tisdell, 2020), and its metaphorical representation draws widespread scholarly attention (Olza et al., 2021), we chose COVID metaphors as the focus of our two case studies. Existing studies on COVID metaphors in the Chinese context typically adopt a monolingual approach, focusing on either Chinese media (Gui, 2021) or English news (Yu, 2022). While Lu and Yu (2023) extends this analysis to compare metaphors describing COVID vaccines across the Chinese and American news media, they do not touch upon metaphors employed by the same text-producer. Instead, we selected the Chinese newspaper *Global Times* as the data source considering its readership and political orientation. Affiliated with the *People's Daily*, the official newspaper of the Communist Party of China, *Global Times* tends to align with the Chinese government's perspectives and policies (Meng, 2018). *Global Times* stands out as the sole media source in China that publishes newspapers in both Chinese (https://www.huanqiu.com) and English (https://www.globaltimes.cn), with the English reports mostly translated from their Chinese counterparts. It boasts a daily print circulation exceeding 2.6 million, along with 8 million daily page views, 2.5 million app users, and a social media following of 100 million across platforms such as Weibo, WeChat, TikTok, Facebook, and Twitter.[2]

In March 2020, *Global Times* started to publish COVID-19-related opinion articles in both Chinese and English languages to counter misrepresentations of the coronavirus, including terms like 'China virus', 'Wuhan virus', or 'Kung flu' in American mass media. Given its bilingual news practice and its sustained focus on COVID-19 over time, *Global Times* is an exemplar for studying cross-linguistic and time-based dimensions of discourse.

Case study 1: metaphors across languages in the Global Times's 2020 bilingual COVID-19 reports

In Stage 1, an analysis of the context leads to a legitimate question regarding the potential disparities in the construction of the 'COVID-19 reality' through metaphorical language in Chinese and English reports. China implemented some of the most stringent COVID-19 restrictions in the world in 2020. *Global Times*'s Chinese and English news reports have different readerships: the Chinese reports mainly targeting the Chinese people in Chinese Mainland whereas the English reports mainly targeting foreigners who are interested in China.[3] When reporting the same COVID-19 event, *Global Times* may prioritise different concerns and values based on the preferences and perspectives of these varied readerships. To answer the above-mentioned question, we complied a corpus of Chinese and English COVID-19 opinion articles from *Global Times* published in 2020. COVID-19 opinion articles are those with the keywords 'COVID', 'coronavirus', 'pandemic', 'epidemic', or 'pneumonia' in either the title or content. In total, 85 Chinese news articles and their English counterparts were collected, amounting to 55,593 Chinese words and 56,494 English words, respectively.[4]

In Stage 2, we identified metaphors as well as the correspondence between them in the Chinese (the source text, ST) and English (the translated text, TT) reports. Unlike Charteris-Black (2004) who usually starts with a close reading of a sample of texts to generate a list of metaphorical keywords to be searched in the whole corpus, we started by generating a list of terms related to the research topic, i.e. COVID-19 in this case (See Table 1 below), which were further used as the keywords for generating concordance lines in AntConc Version 3.5.9 (Anthony, 2020). As a result, we generated a total of 1,591 Chinese concordance lines and 1,639 English concordance lines for COVID-19-related topics (window size: 150 words).

We then used an updated version of Metaphor Identification Procedure (MIP, Pragglejaz Group, 2007) that considers word classes and direct metaphors (e.g. similes) to identify metaphors describing the COVID-19-related topics within the concordance lines. Hence, we identified metaphors in words rather than phrases (Charteris-Black, 2018, p. 219).

Table 1. Keywords for generating COVID-19-related concordance lines in AntConc.

Keywords in English texts	Keywords in Chinese texts
Covid*[5]	covid*
	冠状* (guānzhuàng, corona)
	新冠* (xīnguān, novel corona)
virus	病* (bìng, virus/disease/pathogen/case)
disease*	
pathogen*	
case*	
pneumonia*	肺炎 (fèiyán, pneumonia)
demic	流行* (liúxíng, pandemic/epidemic/plaugue)
plague*	*疫* (yì, pandemic/epidemic/plague/virus fight/vaccine)
vacci*	
influenza*	流感* (liúgǎn, flu/influenza)
flu	
infect*	传染* (chuánrǎn, infection/infectious disease)
crisis*	危机* (wēijī, crisis)
outbreak*	爆发/暴发 (bàofā, outbreak)

In fact, all these methods have their strengths and weaknesses and analysts can select the one most suited to the subject matter they interrogate. Here, Charteris-Black's approach enables to discover the most prominent metaphors in the texts without limiting the topics they describe, and metaphors are identified in their naturally occurring texts. Our approach ensures to identify evident metaphors specifically for the COVID-19-related topics, making our later comparative analysis more viable and systematic. Moreover, the MIP guidelines provide the basis for future replicability. Admittedly, neither approach can generate an exhaustive list of metaphors, although they harness respective strengths to serve slightly different purposes.

As noted in Section 3, there are six types of correspondence between metaphors in a translation scenario: metaphor-to-metaphor (M-M), metaphor-to-a-different-metaphor (M1-M2), metaphor-to-paraphrasing (M-P), non-metaphor-to-metaphor (P-M), metaphor-to-omission (M-0), zero-element-to-metaphor (0-M). After identifying COVID metaphors in the Chinese and English news reports separately, we put them in pairs and interrogated their correspondence relationships based on the sixfold categorisation.

In Stage 3, we analysed the correspondence patterns and interpreted how the same topics were described using similar or different metaphors for Chinese and English readers of the news reports. As shown in Figure 2 below, around half of the metaphors in the Chinese reports were kept in the English reports, presenting a M-M correspondence. The retaining of the same metaphor was largely to provide a negative portrayal of the pandemic for both *Global Times*'s Chinese and English readers.

For instance, in example (1) below, the original metaphor COVID-19 PANDEMIC IS MASSACRE is retained through a direct translation of '屠宰场' into 'slaughtering field'. By keeping the same negatively-connoted metaphor, *Global Times* highlights the cruelty of the virus and the pandemic, which takes the American people's lives.

(1) M-M; COVID-19 IS MASSACRE→COVID-19 IS MASSACRE

ST:	世界	头号	发达	国家	的	各种	优势	全都	被	疫情
	shìjiè	tóuhào	fādá	guójiā	De	gèzhǒng	yōushì	Quándōu	Bèi	yìqíng
	World	number one	developed	country	AUX	all kinds	Advantage	all	PASSIVE	epidemic
	吞没	了，	成为	病毒	对	人类	的	血腥	屠宰场。	
	Tūnmò	Le	chéngwéi	bìngdú	duì	rénlèi	de	xuè xīng	Túzǎichǎng	
	Engulf	AUX	become	virus	towards	human	AUX	bloody	slaughtering field	
TT:	All the advantages of the world's most developed country have been eroded by the pandemic. The US has become the virus' **slaughtering field**.									

Nevertheless, metaphor-to-omission is also a typical correspondence relationship in *Global Times*'s translation practice, accounting for around one-fifth of the total. This is counterintuitive because translations are deemed transparent, and the target readers either have no idea that they are reading a translated version or expect to read a version not distinct from the original. In fact, there are two different omissions in *Global Times*'s news translation practice: one is a total omission of the original text, which means that the target English readers have no idea what is said in the original text; the other is a partial omission, which means that the target readers only receive part of the information.
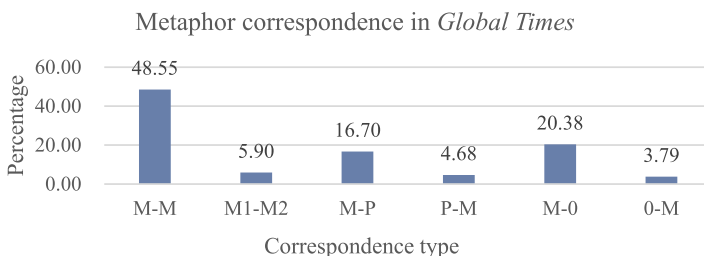
Metaphor correspondence in *Global Times*

Figure 2. Metaphor correspondence in *Global Times*.

Examples (2) and (3) explain the two types of omissions, respectively. In example (2), the blame on the US, a 'battlefield' of the pandemic, for not taking proactive measures to 'confront' the virus was totally omitted in the English version. Nevertheless, in example (3), the information about how China paid attention to vaccine research and development for the common interests of all humanity was maintained in the English version, even though the WAR metaphor (cf. '抗疫') was omitted. In this sense, *Global Times* downplays its negative attitudes towards the US to English readers by completely omitting the entire sentence. In contrast, by partially omitting the WAR metaphor, *Global Times* emphasises the pandemic as a 'war' more to Chinese readers while still presenting the positive aspect of China to English readers, namely China's active role in vaccine research and development.

(2) M-0; COVID-19 IS WAR→Omission

ST:	事实上，	不管	在不在	世卫组织	中，	美国	都	是
	Shìshíshàng	búguǎn	zàibúzài	Shìwèizǔzhī	zhōng	měiguó	dōu	shì
	In fact	whether	in or not in	WHO	AUX	US	still	is
	人类	与	病毒	对抗	的	一处	战场，	华盛顿
	rénlèi	yǔ	bìngdú	Duìkàng	De	yīchù	zhànchǎng	huáshèngdùn
	human	and	virus	Confrontation	AUX	one	battlefield	Washington
	的	放弃	是	对	整个	人类	的	坑害。
	De	fàngqì	shì	Duì	Zhěnggè	rénlèi	de	kēnghài
	AUX	give up	is	Towards	whole	humanity	AUX	trap
TT:	Total omission							

(3) M-0; COVID-19 IS WAR→Omission

ST:	中国	的	官方	态度	不是	搞	'疫苗	竞争'，
	zhōngguó	De	guānfāng	tàidù	búshì	gǎo	yìmiáo	jìngzhēng
	China	AUX	official	attitude	not	do	vaccine	competition
	更非	要	搞	什么	'疫苗	外交'，	而是	基于
	gèngfēi	Yào	Gǎo	shénme	yìmiáo	wàijiāo	érshì	jīyú
	even not	want to	Do	what	vaccine	dilopmacy	but	base on
	全	人类	共同	抗疫	的	利益。		
	quán	Rénlèi	gòngtóng	kàngyì	De	lìyì		
	whole	Humanity	common	fight pandemic	AUX	interest		
TT:	China's attention is not on 'vaccine race', let alone so-called 'vaccine diplomacy', but on the common interests of all humanity.							

Paraphrasing is another frequently used strategy for *Global Times* to translate COVID metaphors. In most cases, it was WAR metaphors that were paraphrased into non-metaphorical expressions, as shown in example (4) below. While the mentioning of the US government's reluctancy to admit its blunders and deficiencies in anti-epidemic work was maintained in the translation process, it was the Chinese readers who was presented with its severe outcome, i.e. the 'war' against the pandemic globally could fail because of this.

(4) M-P; COVID-19 IS WAR→Non-metaphorical expression

ST:	尤其	让	人	悲哀	的	是，	美国	政府
	yóuqí	ràng	Rén	bēiāi	De	shì	měiguó	zhèngfǔ
	especially	let	people	sad	AUX	is	US	government
	至今	不	认为	他们	的	抗疫	组织	工作
	zhìjīn	bú	rènwéi	tāmen	De	kàngyì	zŭzhī	gōngzuò
	till today	Not	think	their	AUX	fight pandemic	organization	work
	有	任何	失误	和	不足。			
	yǒu	rènhé	shīwù	hé	Búzú			
	have	Any	mistake	and	shortcoming			
TT:	It's more unfortunate that until now, the Trump administration doesn't think it has made blunders and deficiencies in their <u>anti-epidemic</u> work.							

While analyses show that the Chinese readers generally encountered more WAR metaphors than their English counterparts, there are still some occasions when WAR metaphors were specifically created for the English readers. Example (5) below is a case in point. While both Chinese and English readers receive the information that the pandemic is even worse than the other two tragedies in the US, i.e. the 'Pearl Harbour attack' and the '9.11' event, only the English readers were explicitly presented with the pandemic as a 'war attack' too.

(5) 0-M; Zero element→COVID-19 IS WAR

ST:	蓬佩奥	星期三	宣扬	中国	导致	了	全球
	péngpèiào	xīngqīsān	xuānyáng	Zhōngguó	dăozhì	le	quánqiú
	Pompeo	Wednesday	publicize	China	cause	AUX	globe
	几十万	人	死亡，	特朗普	总统	则	称
	jǐshíwàn	rén	sǐwáng	Tèlǎngpǔ	zǒngtǒng	zé	chēng
	hundreds of thousands of	people	death	Trump	President	then	claim
	新冠	疫情	比	珍珠港	被	袭	和
	xīnguàn	yìqíng	bǐ	Zhēnzhūgǎng	bèi	xí	hé
	corona	pandemic	compare	Pearl Harbour	PASSIVE	attack	and
	'9.11'	事件	还	严重			
		shìjiàn	hái	Yánzhòng			
	9.11	event	more	Series			
TT:	Pompeo on Wednesday blamed China for the deaths of hundreds of thousands of people around the world while US President Donald Trump claimed the coronavirus **<u>attack</u>** is 'worse than Pearl Harbour' and 'the World Trade Center'.						

There are plenty of examples such as these that reveal the manipulative practice of the *Global Times*. Due to space limit, it is difficult to present them in full. Here, we move to Stage 4 – Metaphor Explanation. An interrogation of the socio-political context surrounding these linguistic phenomena reveals that the use of COVID metaphors in *Global Times* is constrained by its varying reader groups.

Chinese readers are mostly the Chinese people residing in Chinese Mainland, whereas English readers are predominantly foreigners who have an interest in China. Back in 2020, these two different reader groups typically faced contrasting COVID policies and restrictions. In China, President Xi Jinping declared the pandemic a 'people's war' (Kania & McCaslin, 2020), setting the tone for proactive strategies against the pandemic. From early 2020 to mid-2021, the Chinese government implemented a zero-COVID policy in Chinese Mainland, incorporating measures such as contact tracing, mass testing, border quarantine, and lockdowns. A typical lockdown example is the one in Wuhan City from January 28 to April 8, 2020.[6] Unlike China, many Western countries, including the US, imposed significantly fewer COVID restrictions, although there were temporary lockdowns.[7]

The *Global Times* likely tailors its use of metaphors in the source and translated news reports to cater to the two different audiences. Considering the *Global Times*'s alignment with the Chinese government's stance, the excessive use of WAR metaphors in its Chinese news reports may serve to justify the COVID-19 restrictions imposed by the government in 2020 to the Chinese people in Chinese Mainland. However, it is worth noting that, *Global Times*, while maintaining its political alignment, may adopt a more tempered approach for its foreign readers. This is because they generally hold socio-political beliefs that differ from those of the Chinese people. Foreign readers may be more inclined to be critical of China's stringent policies, particularly when comparing them to the policies of their own countries. Meanwhile, given the strained relations between China and the US, *Global Times* sometimes keeps or creates WAR metaphors in the English reports, aiming to criticise the ineffective COVID response measures in the US in 2020.

Case study 2: metaphors over time in Global Times' 2020 bilingual COVID-19 reports

Case Study 1 presented the procedures for analysing cross-linguistic differences using this specialised analytical approach, particularly metaphor variance in the source and translated news in *Global Times*' COVID-19 news reports in 2020. To clarify how analysers may approach the same dataset from different angles (cross-linguistic versus time-based), we chose to use the same COVID-19 reports for Case Study 2. While Case Study 2 is still about COVID metaphors used in the *Global Times*' 2020 news reports, it will be more specifically focused on the pattern of WAR metaphor use over time. WAR metaphors were selected mainly for two reasons: first, they happen to be the most frequently used metaphors in the datasets, accounting for 646 instances (78.7%) in the Chinese news reports and 405 instances (72.78%) in the English news reports; second, the use of WAR metaphors is quite debatablle. While, on the positive side, they may foster a sense of unity and coordination in response to the pandemic (Charteris-Black, 2021), WAR metaphors could potentially result in counterproductive framing effects. For instance, describing COVID patients as fighters could induce feelings of guilt in those unable to recover (Semino, 2021). Moreover, governments might employ them to foster obedience, posing a potential threat to democracy (Benzi & Novarese, 2022). In this sense, an examination of the *Global Times*'s intent in employing WAR metaphors over time in its Chinese and English news reports becomes intriguing.

In contrast to our approach in Case Study 1, where we compared the use of metaphors in Chinese and English news reports, Case Study 2 takes a slightly different approach.

Rather than comparing the use of WAR metaphors over time in each language (for which a detailed analysis is provided in Liu & Tay, 2023), our focus is on investigating *Global Times*'s stance mediation over time through the translation of WAR metaphors. In so doing, this study presents the applicability of the analytical approach from a wider range of perspectives. Stance mediation in Translation Studies refers to translation as 'a process of altering the original author's stance into one that may be different in the target context' (Liu & Li, 2022) through interventions, rewritings or manipulations from the translator in the [news] transediting process (Zhang, 2013). Our previous study reveals that metaphor translation can serve as a representation of stance mediation (Liu & Li, 2022). We employed the same codebook as in Liu and Li, (2022) to annotate the good-bad attitude (positivity, negativity and neutrality) and attitudinal intensity (strengthening, weakening, or keeping the original attitude unchanged) of the identified WAR metaphors. All WAR metaphor instances in this study carry a negative element, as creating a war-like scenario for the pandemic implies physical damage, aggressive actions and the deadly consequences of potential failures in action. However, such a negativity towards COVID-19 can be strengthened, weakened, or kept unchanged through translation, by adding, reducing or retaining WAR metaphors.

Among the 689 instances of WAR metaphor correspondence, 356 instances have their negativity kept unchanged (Ng-Un, 51.67%), 289 instances have negativity weakened (Ng-Wk, 41.94%), and 44 instances have the negativity strengthened (Ng-St, 6.39%). When plotting the stance mediation over time, this study employs the notion of 'COVID weeks', thereby excluding weeks that do not have COVID reports. In total, there are 30 COVID weeks for *Global Times*'s 2020 COVID reports. To compare attitudinal intensity over time, we calculated the normalised frequency $\left(= \dfrac{Number\ of\ each\ attitudinal\ intensity\ each\ week}{Total\ number\ of\ metaphor\ correspondence\ each\ week} \right)$. We then began our analysis using this specialised analytical approach as follows.

In Stage 1 – Contextual Analysis, time spans were observed within the datasets. This prompted the formulation of the following research question: How did *Global Times* mediate its negative attitudes towards the pandemic through the translation of WAR metaphors for its English readers over time?

In Stage 2 – Metaphor Identification, we established that in this case study, WAR metaphors and the corresponding attitudinal intensity scatter across equal time intervals, namely the 30 COVID weeks. Hence, we opted for a time series analysis of the data to examine the potential autocorrelations of attitudinal intensity as manifested through the translation of WAR metaphors over time. Specifically, we adopted the Box–Jenkins TSA method (see Tay, 2022 for a step-by-step guide).

First, as shown in Figure 3 below, we plotted the time series of attitudinal intensity (y-axis) across COVID weeks (x-axis) in *Global Times*'s WAR metaphor translation. Upon visual inspection, it is apparent that all Ng-St, Ng-Un and Ng-Wk series exhibit fluctuations without any obvious long-term trends. This suggests that linear modelling methods may not be suitable. Instead, it is recommended to explore more localised patterns of fluctuations to understand the dynamic stance mediation of *Global Times* towards the pandemic in each series. Figure 4 illustrates the autocorrelation functions (y-axis) across 12 lags (x-axis), which examines the positive or negative correlations between values
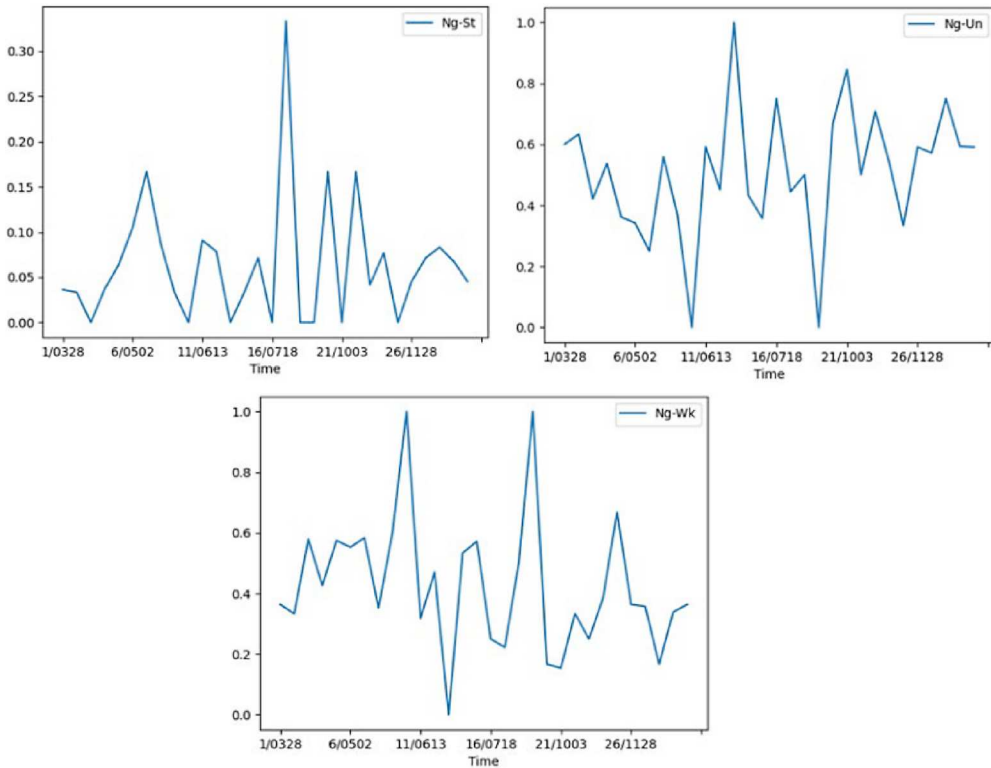
Figure 3. Normalised frequency of attitudinal intensity across COVID weeks in *Global Times*.

spaced 0, 1, 2 … 12 intervals apart. Spikes beyond the blue bands indicate that the corresponding (P)ACF values exhibit statistical significance at the 95% confidence level. Figure 4 shows that all series except the Ng-Wk series exhibit significant correlations between consecutive values. Hence, we attempted to model both Ng-St and Ng-Un series using the auto-ARIMA feature in *Python*.[8]

Auto-ARIMA feature generates the most suitable model for each series based on the criterion of minimum AIC.[9] Auto-ARIMA results show that only the Ng-St series was fitted with the ARIMA(3, 0, 1) model.

In Stage 3 – Metaphor Interpretation, we interpreted the resulting ARIMA model for the Ng-St series. The negativity towards the pandemic was strengthened when more WAR metaphors were used in the TTs than in the STs, such as creating a WAR metaphor from a zero-element (0-M strategy), translating a non-metaphorical expression into a WAR metaphor (P-M strategy), or replacing the original less negatively-connotated metaphor with a WAR metaphor (M1-M2 strategy). The interpretation of the modelling results is closely related to the notion of 'modelability', which can be defined at two levels: firstly, whether any patterns exist in a series of data enabling adequate model fitting, and secondly, elaborating on the precise parameters and coefficients of the fitted ARIMA model (Tay, 2021b). In this study, at a general level, only the Ng-St series is modelled, indicating that *Global Times* may prioritise the addition of WAR metaphors over time, while the reduction of WAR metaphors appears to occur more randomly. Additionally, maintaining the same WAR metaphor represents the 'default' translation method, which is not
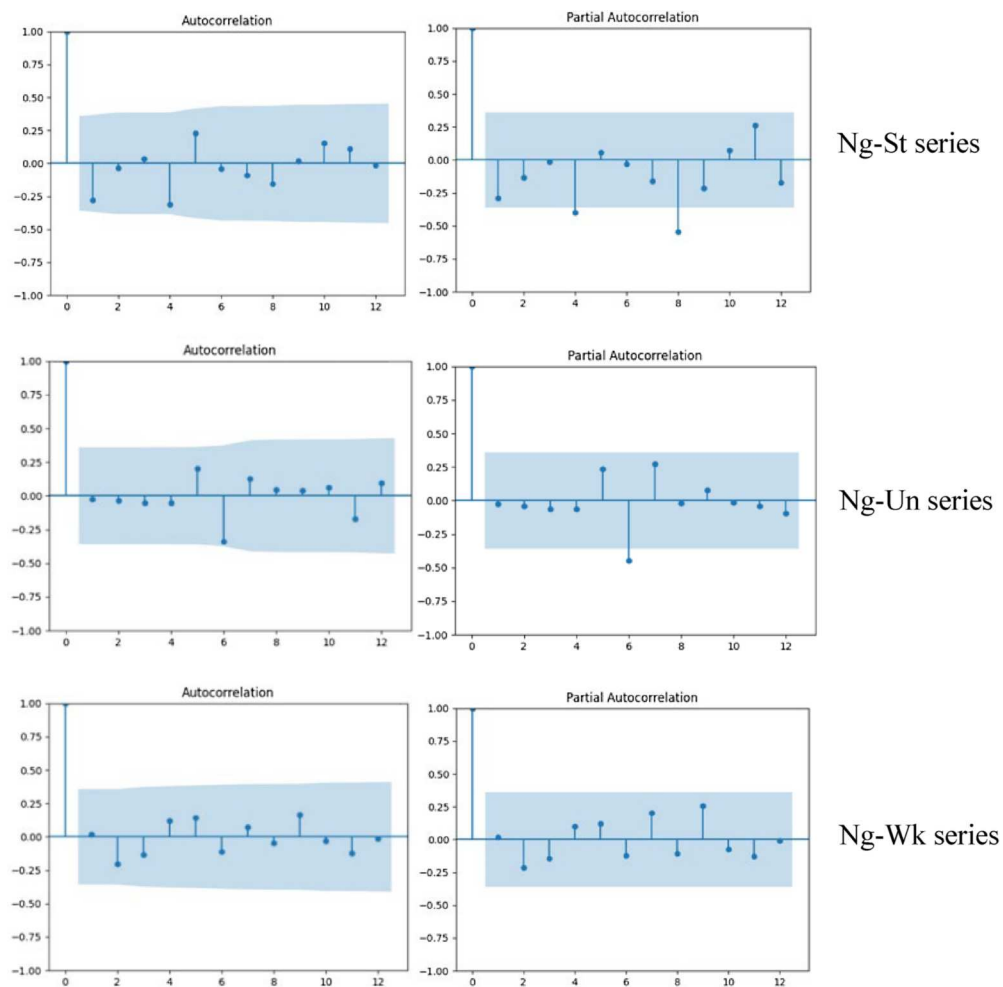
Figure 4. Autocorrelation functions of attitudinal intensity in *Global Times*'s WAR metaphor translation.

predicted from prior translation practices. At a specific level, the ARIMA(3, 0, 1) model implies that the present Ng-St frequency is predicted by both its autoregression (AR) and moving average (MA) model coefficients. Autoregression is a model that predicts how a changing variable (in this case, the Ng-St frequency) regresses on its own prior values. Moving average is a model that predicts the present value using past error terms, that is, the actual value minus the predicted value. Figure 5 below visualises the observed versus predicted values for Ng-St in *Global Times*'s 2020 COVID reports. Upon visual inspection, the observed data seems to lag behind the predicted data, yet the Mean Squared Error (MSE)[10] score is close to zero (0.008772), indicating acceptable model-to-data fit. The predictive accuracy of the fitted model was further evaluated using a train-test approach (see Tay, 2022 for more details). Specifically, the initial 27 out of 30 frequency values were employed as training data to fit the model, while the remaining three values were reserved for testing. The findings show MSE on the
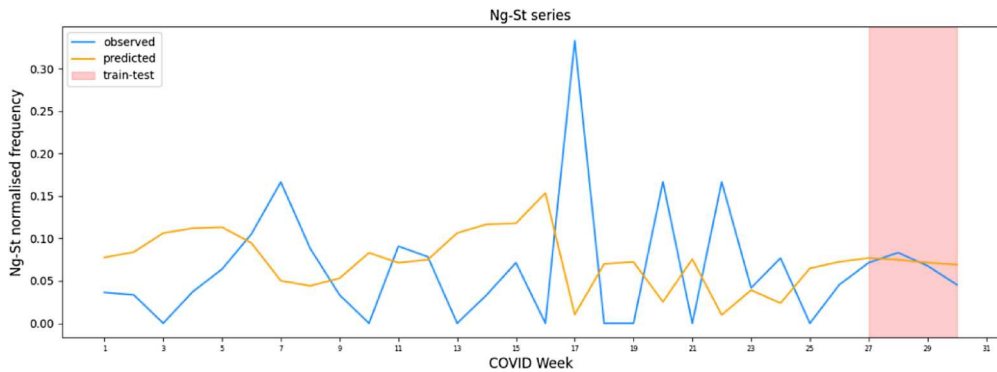
Figure 5. Observed vs. predicted values for Ng-St in *Global Times*.

testing data (weeks 28–30) is small (0.000215), indicating acceptable predictive accuracy marked by a low average distance between the actual and predicted testing data.[11]

Specifically, this ARIMA(3,0,1) model implies that:

- Ng-St frequencies in *Global Times* are positively correlated in successive news articles, but only up to three weeks apart. In other words, the Ng-St frequency at week t, $t+1$, $t+2$ and $t+3$ tend to move in the same direction, but the frequency value at week t does not provide useful information for that at week $t+4$ and beyond; The higher Ng-St frequency in the previous three weeks is likely to be followed by a higher (predicted) frequency at week $t+3$, and vice versa. This corresponds to Tay (2021b) 'short term momentum' concept;
- In the meantime, the present Ng-St frequency is negatively correlated with the size of prior error terms, up to one week apart, but the frequency value at week t does not provide useful information for that week $t+2$ and beyond; A positive error term (i.e. observed frequency higher than predicted frequency) is likely to be followed by a lower (predicted) Ng-St frequency at the next week, and vice versa. This corresponds to Tay (2021b) 'short term restoration' concept.

For instance, the frequency of *Global Times*'s Ng-St attitudinal intensity shows an upward trend at weeks 4–6, followed by a further increase at week 7, showing a short term momentum based on the AR(3) feature. However, when the observed frequency is higher than the predicted frequency, such as at week 7, the Ng-St frequency witnesses a decline at the next week, showing a short term restoration based on the MA(1) feature. While the fitted model may not fully capture these patterns, as shown in Figure 5, the Ng-St series is unique in the sense that it is modellable, irrespective of how precise the fitted model may be. Upon closer examination of the context, *Global Times* strengthens its negative stance towards the pandemic when the newspaper attempts to call for collective action to 'fight' against the virus or when assigning blame to other countries, particularly the US, for perceived lack of swift action. Examples (6)-(8) below illustrate that regardless of whether the Ng-St frequency indicates an upward trend, downward trend, or sudden increase, *Global Times*'s utilisation of more WAR metaphors in the TTs is intended to criticise the US government for its perceived inadequacies in responding to COVID-19 (see

examples 6 and 8). In example (7), *Global Times* rationalises this criticism of another country by highlighting the virus as a common 'enemy' and emphasising the need for joint efforts in pandemic response.

(6) Ng-St: Zero-element→COVID-19 IS WAR (Week #6, April 29, 2020)

ST:	一个	超级	大国	不该	在	这场
	yīgè	chāojí	dàguó	búgāi	zài	zhèchǎng
	One	super	power	should not	in	this
	严酷	的	疫情	中	如此	领跑。
	Yánkù	De	yìqíng	Zhōng	rúcǐ	lǐngpǎo
	Severe	AUX	pandemic	Amid	in this way	lead the race
TT:	A super power shouldn't lead the virus **fight** in this way.					

(7) Ng-St: Zero-element→COVID-19 IS WAR (Week# 9, 19 May 2020)

ST:	坚守	人类	无论	如何	都	是	一个	整体、	病毒
	Jiānshǒu	rénlèi	wúlùn	rúhé	Dōu	shì	yīgè	zhěngtǐ	bìngdú
	stick to	human	no matter	what	All	Be	one	whole	virus
	是	我们	共同	敌人	的	这一	认知	底线。	
	Shì	wǒmen	gòngtóng	dírén	De	zhèyī	rènzhī	dǐxiàn	
	Be	our	common	enemy	AUX	this	cognition	botton line	
ST:	The world should hold the bottom line where humanity should jointly **fight** the virus which is our common enemy.								

(8) Ng-St: Non-metaphorical expression→COVID-19 IS WAR (Week #17, 31 July 2020)

ST:	这样	一个	只	想	通过	欺骗	和	对	外	甩锅
	Zhèyàng	Yīgè	zhǐ	xiǎng	tōngguò	qīpiàn	hé	duì	wài	shuǎiguó
	such	Aa	only	want	through	deception	and	towards	others	throw pot
	来	逃脱	公众	指责	并	争取	连任	的	政府，	不可能
	Lái	táotuō	gōngzhòng	zhǐzé	bìng	zhēngqǔ	liánrèn	de	zhèngfǔ	bùkěnéng
	To	escape	public	blame	And	strive for	reelection	AUX	government	impossible
	领导	美国	针对	现实	疫情	做出	决定性	的	改变。	
	lǐngdǎo	měiguó	zhēnduì	xiànshí	yìqíng	zuòchū	juédìngxìng	de	gǎibiàn	
	Lead	US	against	reality	pandemic	Make	decisive	AUX	change	
TT:	The Trump administration only wants to escape public criticism and win re-election by deceiving and passing the buck to other countries. It is impossible for such a government to lead the US to make fundamental changes in the **fight** against epidemic.									

In Stage 4 – Metaphor Explanation, we provide the socio-political context for Ng-St's time-structuring patterns in *Global Times*'s WAR metaphor translation. Notably, among the three types of attitudinal intensity, Ng-St accounts for a much smaller proportion than Ng-Wk and Ng-Un (6.39% vs. 41.94% vs. 51.67%). This suggests that the Chinese readers generally tend to receive more WAR narratives than their English counterparts, which is consistent with the outcomes in Case Study 1. Nevertheless, even though the strengthening of negativity is not frequently observed, it overall demonstrates a consciously or subconsciously employed time-structuring pattern. This is counterintuitive because the use of WAR metaphors typically aligns with the actual unfolding of the

COVID-19 event which is unpredictable, and thereby non-modellable. A closer examination of the context reveals that *Global Times* tends to employ more WAR metaphors in the TTs from time to time to emphasise to the English readers the necessity to 'fight' the common 'enemy' and the consequence of the US's failure to do so. These time-structuring patterns complement the results in Case Study 1.

Discussion

The *Global Times*'s Chinese-English COVID-19 reports in 2020 provide a good illustration of how the specialised cross-linguistic and time-based analytical approach of CMA can be applied to the fields of research beyond the (Critical) Discourse Studies, namely to researchers interested in translation and bi/multilingual environments. Specifically, the two case studies demonstrate how researchers may approach the same datasets from different angles, with one focusing on source text-translated text differences and the other on correlations between successive discourse features over time. The former is a typical inquiry in Translation Studies, while the latter is rather new in Discourse Studies.

This study also suggests the high potential for combining both cross-linguistic and time-based perspectives. Case Study 1 is an overview of the translation of COVID metaphors in the newspaper's 2020 reports, while Case Study 2 is a more nuanced time-based analysis of the WAR metaphor translation in the newspaper. Specifically, in Case Study 1, we observed a rather low frequency of WAR metaphor creation from zero-elements (metaphor correspondence: 0-M). Nevertheless, the time series analysis in Case Study 2 yielded more compelling results regarding practices such as these, as the outcome of creating more WAR metaphors in the translated text, that is, the strengthening of the negativity towards the pandemic (Ng-St), shows a time-structuring pattern. Such time-structured creation of WAR metaphors is related to the Chinese COVID restrictions in 2020 and the political conflicts between China and the US, as shown in Case Study 2. This finding could have been overlooked due to the relatively low frequency of 0-M practices, which are challenging to interpret with a naked eye but can be effectively analysed using data analytic methods.

Moreover, Case Study 2 also suggests that researchers can use this specialised analytical approach of CMA not only to analyse metaphors themselves, but also to examine the implications or effects of employing such metaphors. While the current study analyses stance evaluation resulting from the translation of WAR metaphors, researchers can also examine other related discourse features, such as the translation methods of these metaphors. The choice of these features depends on the specific research questions and fields of study.

Noteworthily, the two case studies are limited to a news translation setting where the source and translated texts are produced by the same social agent. However, this specialised analytical approach of CMA can also be applied to other types of cross-linguistic and time-based analyses. For analyses of cross-linguistic differences, researchers can examine how the same topic is framed using different metaphors from various data sources (e.g. the analysis of metaphors in news media from different country contexts to describe the COVID-19 pandemic), or how different topics are described using similar types of metaphors (e.g. the use of WAR metaphors to describe political, economic, and social topics within a culture). In such cases, the analysis can be bilingual or multilingual and the

text producers can be the same or different. For time-based inquiries, researchers can explore discourse in relation with the actual unfolding of a social event, such as the use of metaphors across various stages of the pandemic, starting from the initial outbreak, through the subsiding phase, and into the post-pandemic stage. For all this research, the four principle stages are the same, but the detailed interpretation and explanation of the results vary depending on the research questions and the actual socio-political context.

Conclusion

This study builds upon the schematic four principle stages of Charteris-Black's (2018) Critical Metaphor Analysis, putting forward a more specialised, hands-on analytical approach that is well suited for a range of research objectives in translation and bi/multilingual settings where both cross-linguistic and time-based perspectives can be considered. We have demonstrated the utility of this narrowly focused but more detailed analytical approach through two case studies analysing the *Global Times*' bilingual COVID-19 reports in 2020. While we focused on the translation practice of COVID-related metaphors as well as a time series analysis of the attitudinal intensity manifested through the translation of WAR metaphors, researchers can apply this analytical approach to other types of cross-linguistic and time-based analyses, provided there are metaphorical correspondences – be it loose or precise – and time intervals – be it equal or unequal.

Nevertheless, it is important to note that while this analytical approach offers detailed guidelines for researchers interested in translation and bi/multilingual settings as well as metaphor use over time, it may not include all ideological contexts covered by Charteris-Black's (2018) more schematic Critical Metaphor Analysis.

Notes

1. Due to copyright restrictions, we are unable to reproduce Charteris-Black's Figure on the Principle Stages of Critical Metaphor Analysis in the article.
2. See https://www.globaltimes.cn/adv.html.
3. While *Global Times* does not disclose the distribution of its reader groups, it briefly mentions its primary target audience on the introductory webpages of the Chinese (https://corp.huanqiu.com/about/) and English (https://www.globaltimes.cn/about-us/index.html) editions. To simplify, we use 'Chinese audience/readers' to denote those accessing the Chinese reports and 'English audience/readers' to signify those accessing the English reports.
4. Words in both Chinese and English languages refer to lexical units assigned with a part-of-speech (POS) tag in corpus tools.
5. * means any letter(s). For instance, *demic* can refer to 'pandemic' and 'epidemic'.
6. See https://www.bbc.com/zhongwen/simp/chinese-news-52197004 for the timeline of the lockdown in Wuhan.
7. See https://www.nbcnews.com/health/health-news/here-are-stay-home-orders-across-country-n1168736 for coronavirus lockdowns in the US.
8. We chose to employ the auto-ARIMA feature for model selection rather than following the manual model selection guidelines (Tay, 2024) because the significant spikes observed in the current study do not occur in consecutive order, which makes the manual method less straightforward. However, researchers may resort to Tay's (2024) manual method when the significant spikes exhibit more discernible patterns, which is usually more accurate.

9. AIC, namely Akaike Information Criterion, is an estimator of prediction error and thus the relative quality of statistical models for a specific dataset. A lower AIC value indicates less information loss by a model, and vice versa.
10. MSE, or mean squared error, calculates the square of each error (the difference between the actual and predicted values) and then divides the sum by the number of observations. It is a scale-dependent measure, with a smaller value usually indicating better goodness-of-fit.
11. As shown in Figure 5, the discrepancies between observed and predicted values are substantial in certain weeks, indicating that the ARIMA(3,0,1) model does not capture the discourse patterns with complete accuracy. In addition to the train-test approach, we experimented with various AR and MA coefficients, SARIMA modeling, and the grid search method to generate alternative models. Unfortunately, these resulting models proved to be even less ideal than the ARIMA(3,0,1). We therefore hypothesize that incorporating external factors could enhance the model's accuracy. However, we are unable to specify these external factors or quantify them for inclusion in the model. Despite these challenges, Case Study 2 remains valuable, as it demonstrates the first level of 'modelability' and addresses part of the second level of 'modelability'. This complexity also aligns with the nature of discourses.

Disclosure statement

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