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Comparative Analysis of News Discourse on Public Health Emergencies from a Proximization Theory Perspective

Abstract: This paper describes a study built on a small corpus based on *China Daily*'s coverage of SARS and COVID-19 and analyzes the proximization strategies and metonymic words used on the spatial, temporal, and axiological axes. The study finds that the two public health emergencies' coverage at different times utilizes a large number of proximization strategies and metonymic words. The difference is that the COVID-19 news draws upon significantly more proximization strategies than the SARS news. The findings suggest that from SARS to COVID-19, Chinese media have accumulated substantial experience in practice and have become increasingly professional in their reporting. Specifically, during the COVID-19 outbreak, they were more skillful at employing discursive strategies to guide the public to respond to the central government's call for anti-epidemic actively and capitalizing on discursive strategies to establish a harmonious atmosphere for all individuals to combat the epidemic and enhance the determination and cohesion in the fight.

Keywords: *China Daily*; SARS; COVID-19; proximization strategies; metonymic words

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1 Introduction

According to the *Regulation on Preparedness for and Response to Emergent Public Health Hazards* (2003), a public health emergency refers to a contagious disease or large-scale event that suddenly poses a public health concern and requires urgent measures. SARS and COVID-19 are two representative major

public health emergencies. In 2003, SARS was spread throughout China, which is the seriously devastating epidemic of the 21st century. The second public health emergency was COVID-19 which began in December 2019. During the epidemic phase, numerous media actively guided social opinion while conveying information to the public. In short, the discourse on epidemic prevention and control has shown rich discourse characteristics (Zhang and Wang 2020: 115). As a result, the study of epidemic-related discourse has become an important area of interest for linguistic scholars. This includes news narrative (Zhang and Ji 2021), social media discourse (Yao et al. 2021), heroic discourse (Shan et al. 2021), and metadiscourse (Yang 2021). However, few studies have explored changes in the cognition of epidemic-related news discourse from a macro-temporal perspective.

Proximization Theory can be loosely described as a discursive strategy that ultimately legitimizes the speaker's defense. This legitimization comes from a process wherein an entity with opposite values is constantly approaching the speaker. The addressees perceive this approach and thus believe that the speaker is acting in the right way. It has been applied to discourse studies on various subjects, such as war discourse (Cap 2013), non-traditional security discourse (Zhao and Zhao 2021), immigration discourse (Wu and Niu 2018), and "Huawei threat" discourse (Zhou 2021). The above studies have confirmed the effectiveness of Proximization Theory in Critical Discourse Analysis, but most of them have only used Proximization Theory alone, thus lacking a broader theoretical framework. Although some scholars (Hart 2010; Zhang 2016; Li and Pan 2021) have attempted to combine Proximization Theory with other theories from Cognitive Linguistics such as metaphor and categorization, the combination with metonymy remains unclear.

Given this, this paper describes a study that employed Critical Cognitive Linguistics as a theoretical framework. The study developed two small corpora to compare and contrast the proximization strategies and metonymic words used in SARS and COVID-19 news in an attempt to depict a convergent path while exploring the parallels and distinctions in the proximization strategies drawn upon by the media in response to public health emergencies in different periods.

2 Background on Proximization Theory and metonymy

2.1 Proximization Theory

Chilton (2004) emphasizes that, in conversation, we map out the mental space in which the world portrayed by the discourse is conceptually represented in our thinking, which is the Discourse Space. It is a three-dimensional space where the spatial, temporal, and modal axes intersect at the deictic center.

The theory of proximization proposed by Cap (2013) is a further development of the Discourse Space Theory. It is a discursive strategy that presents events and states being distant in space, time, and value at the lexico-grammatical level and having an imminent negative impact on the speaker and his or her addressees so that addressees perceive the threat posed by entities outside the deictic center (ODCs), which causes the addressees to be alerted and thus to take precautionary actions to avoid the expected impact. The underlying purpose of this strategy is to legitimize the speaker's actions. It can be argued that proximization is a strategically planned cognitive and pragmatic construal operation in which the speaker organizes his or her speech (Cap 2017a: 24).

More specifically, this construal operation could be divided into spatial proximization, temporal proximization, and axiological proximization. The threat can come from these three axes that intersect at the deictic center. (1) The first axis is spatial proximization, where the ODCs are perceived by the addressees as encroaching on the IDCs at the level of physical space. At the lexical-grammatical level, there are six modes of expression: noun phrases denoting elements of the deictic center (IDCs), noun phrases denoting elements outside the deictic center (ODCs), motion and directionality verb phrases referring to the movement of ODCs toward IDCs, action verb phrases referring to the influence exerted by the ODCs on IDCs, abstract noun phrases indicating the anticipation due to the influence of ODCs on IDCs, and abstract noun phrases indicating the result due to the influence of ODCs on IDCs (Cap 2013: 75–109). (2) The second axis is temporal proximization, which means that the threat is approaching. Thus, it is so urgent that the addressees must take immediate precautions. At the lexico-grammatical level, temporal proximization can be expressed in five forms: indefinite noun phrases constructing the impact of ODCs in other temporal frames, the simultaneous use of the general past tense and the present perfect constructing an infinite

extension of the threat of past events to the future, nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future, modal verb phrases constructing continuous ODCs' impact between the present and the future, and parallel contrastive sentence forms constructing oppositional and privileged futures extending from the now (Cap 2013:111–126). (3) The third axis is axiological proximization, which is used to identify the conflict between the values of IDCs and ODCs. There are three types of expression at the lexico-grammatical level: noun phrases denoting positive values or ideologies of IDCs, noun phrases denoting negative values or ideologies of ODCs, and linear arrangements of lexico-grammatical phrases constructing materialization of the ODCs' negative values in the IDCs' space (Cap 2013: 119–122). The three aspects of the proximization strategy drive the ODCs closer to the addresser-addressees territory with adverse effects. Therefore, addresser and addressees are forced to adopt relevant measures to avoid harm so that the discursive strategy of proximization becomes one of the main legitimizing tools in political discourse (Cap 2008: 39).

The main purpose of the public discourse on the epidemic is to provide information and explain the current situation promptly to remind the addresses about the destructiveness of the virus. Eventually, the public will comply with the government's appeal to take precautionary steps in a positive and orderly manner. This intention is consistent with the essence of Proximization Theory. Consequently, it is suitable to analyze epidemic discourse using Proximization Theory.

2.2 Metonymy

Metonymy is a fundamental cognitive and linguistic process in which one entity represents the other based on relations of contiguity (Evans and Green 2015: 311). One is the cognitive reference point, whereas the other is the goal. In this way, the addressees are guided to perceive the target domain from the perspective of the cognitive reference point (Langacker 2008: 69). Many studies have explored the cognitive mechanisms of language from the perspective of metonymy. Wang (2014), for example, provides a unified explanation for Referentialism based on the metonymy theory. Wei (2019) explores the metonymic mechanism of Chinese idioms. Apart from that, many scholars have conducted metonymic studies from the perspective of Critical Discourse Analysis. For example, Li and Wang (2015) attempt to set a theoretical framework for critical metonymy analysis. Later, Hu (2019)

further refines the research framework of critical metonymy analysis and applies it to a specific corpus to explore the metonymic words in courtroom discourse. Mclachlan (2021) takes multimodal discourse as the research object to analyze the role of metonymy in high school web page narrative and reveals the neoliberal ideology in it. These empirical studies amply confirm that metonymic analysis is a crucial component of Critical Discourse Analysis because of its powerful explanatory power in the cognitive model and ideological study of texts (Zhang and Zhang 2012). Therefore, it is an inevitable trend to use metonymy to conduct critical cognition research.

Metonymy and Proximization Theory have the basis for building a framework for integration. First, both theories complement Critical Discourse Analysis from a cognitive perspective. In relation to theoretical foundations, both of them focus on the cognitive construal of texts. Secondly, in terms of research methodology, they are both based on the text for the identification, description, and interpretation of discursive strategies. Thus, Proximization Theory can combine with metonymy to better understand the ideology behind the language.

3 Methods

3.1 The corpus

The corpus for this study was collected from news articles during the early stages of SARS and COVID-19. (1) A search was conducted on the official website of *China Daily* (http://www.chinadaily.com.cn/) using *SARS* and *atypical pneumonia* as the keywords and being limited to the period from November 2002 to May 2003. Forty-five reports were randomly selected to form a corpus totaling 20,397 words in SARS reports. (2) Regarding the corpus of COVID-19, a search was conducted on the official website of *China Daily using COVID-19* and *novel coronavirus* as keywords, with the dates being limited to between December 2019 and June 2020. Forty-five randomly selected news articles were used as the content to constitute the corpus, with 20,912 words in COVID-19 reports. These news reports cover the economy, politics, everyday life, and other topics concerning the epidemic.

3.2 Research instruments

The corpus annotation software used in this study was UAM Corpus Tool

3.3x which was developed for the study of Systematic-Functional Grammar, allowing for automatic annotation of content in it. In addition to this, the software had a manual annotation function. Therefore, UAM Corpus Tool 3.3x was perfectly suited to other corpus studies. The process of using the software could be divided into three parts. Firstly, the corpora were input into UAM Corpus Tool 3.3x. Then, the theoretical framework (called "layers" in UAM Corpus Tool 3.3x) was listed in the software. Finally, the corpora were annotated. This meant that the lexico-grammatical item to be annotated was selected in the corpus, and the category to which the item belonged was then clicked in the theoretical framework. It was very convenient for corpus-based Critical Cognitive Linguistic analysis.

In addition, after deriving the relevant data for the two corpora through the UAM Corpus Tool 3.3x, we compared in a statistically significant way using SPSS 20.

3.3 Procedure

The study could be broken down into three sections. (1) Firstly, the news was retrieved from the *China Daily*'s official website and selected to form the corpus. Then, irrelevant information such as headlines and photo descriptions were deleted. (2) In the second stage, the corpus was manually annotated and counted with the help of the UAM Corpus Tool 3.3x to obtain statistical data for each lexical-grammatical item. It should be noted that the adaptability of Proximization Theory varies with different types of discourse (Cap 2017b: 17). In the corpus of this study, few abstract nouns indicated the result due to the influence of ODCs on IDCs, but many concrete nouns indicating the result due to the influence of ODCs on IDCs were involved. Therefore, based on the characteristics of the present corpus, this study made a small adjustment to the lexico-grammatical forms reflecting the proximization strategies: the abstract noun phrases indicating the influence of ODCs on IDCs were expanded to noun phrases. In addition, the statistics followed the 0.1% threshold principle. That is, the lexico-grammatical items counted should occur at least once in every 1,000 words on average (Cap 2013: 108–109). Tables were then plotted based on the statistical results. (3) Finally, a comparative analysis was conducted to illustrate the commonalities and differences in the frequency of relevant wordings to characterize the two corpora in terms of the usage of proximization strategies and metonymic words. At this stage, comparisons between the two groups were made using chi-square tests.

4 Results and discussion

4.1 Analysis of the proximization in SARS news discourse

4.1.1 Analysis of the spatial proximization strategies

The lexico-grammatical items belonging to the spatial proximization and their frequency in the reports on SARS are shown statistically in Table 1.

Table 1: The use of spatial proximization strategies in SARS-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Noun phrases denoting IDCs	doctor/expert/scientist/hospital/researcher/medical personnel/medical staff	283	13.87
	China/the Chinese government/the Chinese Ministry of Health/the State Council	276	13.53
	travel agency/hotel/bus/market/shopping company/college/spending/university/campus/school/kindergarten/economy/Shenzhou V/investment/holiday/examination/The 93rd China Export Commodities Fair	184	9.02
	Beijing/Guangdong/Taiwan Province/rural area/Chinese mainland/village/Macao/SARS-stricken area/North China's Shanxi Province/central and western regions/China's Hong Kong Special Administrative Region	176	8.63
	people/the public/we/resident/passenger/visitor/traveller/tourist	167	8.19
	patient/people in close contact with the sick/pupil or staff infected with SARS	131	6.42
	WHO/WHO official/Japan/some countries	84	4.12
Total		1,301	63.78
Noun phrases denoting ODCs	disease/coronavirus/epidemic/severe acute respiratory syndrome (SARS)/origin of the disease/atypical pneumonia	463	22.70
Total		463	22.70
Motion and directionality verb phrases referring to the movement of ODCs toward IDCs	climb/increase/soar/rise/surge	33	1.62
Total		33	1.62

Category	Lexico-grammatical items	Number of times	Frequency
Action verb phrases referring to the influence exerted by the ODCs on IDCs	die/contract/infect/diagnose	82	4.02
	cancel/delay/postpone/close/trigger/discourage/affect/damage/hit/dip/drop/drag	80	3.92
Total		162	7.94
Noun phrases indicating anticipation due to the influence of ODCs on IDCs	possibility/risk/uncertainty/further spread/forecast for China's trade growth/China's trade deficit this year	42	2.06
Total		42	2.06
Noun phrases indicating the result due to the influence of ODCs on IDCs	case/death	160	7.84
	cough/sneeze/fever/diarrhoea/symptom/shortness of breath	42	2.06
	impact/effect/slump/the drastic fall/trade deficit	33	1.62
Total		235	11.52
Total spatial proximization		2,236	109.62

It can be learned from the data in Table 1 that the core members of the IDC elements in the news about SARS are expressions such as *doctor*, *expert*, and *hospital* (13.87). The emergence of SARS had a great influence on the lives of healthcare professionals. Hospitals and healthcare personnel served as the last line of defense between SARS and the general public. Health personnel sacrificed their time to help fight the virus in the front lines. Placing healthcare workers at the deictic center gives the public a concrete perception of their commitment, which in turn leads to greater understanding and support for anti-epidemic measures. In other words, this positive guidance can increase public participation in the fight against the epidemic. Expressions such as *doctor*, *expert*, and *hospital* are followed by a high proportion of expressions in the category of *China*, *the Chinese government*, and relevant agencies and departments (13.53), which represents the interests of the general public. After SARS was confirmed to be infectious, the Chinese government was active in responding and implementing laws to prevent it from spreading further. A responsible image is brought into focus, which helps to gain popular support and increase cooperation with the call to fight the epidemic. In addition, ordinary institutions and organizations such as *school*, *travel agency* (9.02), and the general public as well as every ordinary person in society (8.19) frequently appear in the coverage, on account of the fact that SARS affected everyone in society and no individual or organization could be left out of the prevention and control of the epidemic. This kind of emphasis forms a sense

of urgency among the people to obey the call to fight the epidemic. There are also names of various places in China (8.63) in the IDC camp, such as *Beijing*, *Guangdong, Macao*, etc., in which SARS cases were reported. The diverse use of place names highlights the widespread nature of the epidemic infestation and conveys the mighty spreading and killing power of the virus in order to stress the perniciousness of SARS and prevent the public from thinking that SARS has nothing to do with them, or that their geographical area is safe. Ultimately, it makes the government's epidemic prevention policy necessary. The most frequently mentioned place name is *Beijing* (2.16), which accounts for a quarter of all place names. Although the case of SARS appeared in Guangdong Province, the epidemic became more and more severe in Beijing as it spread. The repeated emphasis on the areas hardest hit by the epidemic is another way of unveiling the destructive nature of the virus to the public, which justifies the need to fight the epidemic.

The use of names concerning some places and agencies in these IDC entities involves metonymy (10.83), i.e., the names of locations to refer to residents and those of the agencies to refer to officials or staff:

(1) More progress is needed to assist **China's fight** against an epidemic that had claimed the lives of 64 people on the Chinese mainland by Tuesday. (Apr. 17, 2003)

In example (1), *China's fight* actually refers to the resistance of all Chinese people. Based on the affiliation between the source and target domain, this metonymy cognitively focuses on China as a whole. The implication is that the whole country unites in the fight against the epidemic, which further suggests the determination to win in the context of proximization strategies paying attention to the malignancy of SARS.

The ODC elements in SARS-related reports are the SARS-related expressions (22.70). SARS not only is dangerous to people's health, but also affects the normal life of the general public. The placement of SARS as the sole entity at the periphery implies, on the one hand, that the primary entity we fight against is SARS. On the other hand, it is underlined that SARS is so aggressive that so many IDC entities (63.78) are needed to defend against ODC entities. The perniciousness of SARS is highlighted. In these expressions about SARS, "whole-for-part metonymy" is involved, namely *the disease* referring to SARS (4.36). SARS is one of many diseases. Relatively speaking, the public would be more familiar with the term *disease* rather than SARS because SARS is the newer thing. Therefore, it is more cognitively economical to put *the disease* in the

semantic focus. That is, *disease* activates SARS' destructiveness directly in the public perception and is a direct basis for confirming the harmfulness of SARS.

On the basis of IDCs and ODCs, the media also use action verb phrases referring to the influence exerted by the ODCs on IDCs (7.94) and noun phrases indicating the result due to the influence of ODCs on IDCs (11.52) many times to construct the imminence of the risk of SARS:

(2) The unprecedented measure underlined tough actions taken by governments to break the chain of transmission for the mysterious disease, which has **killed** 17 people and **infected** more than 450 around the world, most of them in Asia, in the past two weeks. (Mar. 26, 2003)

(3) Many exhibitions, trade fairs and other trade-promotion activities have been **cancelled** or **postponed** due to fears over SARS. (May 8, 2003)

The successive use of two verbs denoting infection in example (2) gives the reader a more tangible and visual sense of the spread of SARS. This is a concrete manifestation of the negative behavior of SARS, which causes a fear of SARS in the population and legitimizes the fight against the epidemic to raise awareness of precautions. In sentence (3), many events such as exhibitions and trade fairs had to be cancelled because of the potential danger of SARS, which reflects the epidemic's impact on the normal functioning of society. This language strategy aims to lead the public to believe that SARS is extremely destructive, at the same time, suggesting that it is difficult for the general public to have a normal life during the epidemic. Under the circumstances, the underlying assumption is that people who want to return to their previous state of life would proactively take effective measures to join in preventing and controlling the epidemic.

(4) As of yesterday, **2,722 cases**, including **106 deaths**, have been reported by 16 countries. This represents an increase of **51 cases** and **3 deaths** when compared with the previous day's totals. (Apr. 11, 2003)

(5) Cut any journey or travel plans if you or your travelling companions begin to show signs of any of the following-**fever**, **coughing**, **diarrhoea** or **shortness of breath**. Avoid contact with others if you have any of these **symptoms** and seek immediate medical help. (Apr. 16, 2003)

Example (4) provides the number of the confirmed *cases* and *deaths* to present the most severe consequences of SARS to alert readers. This emphasizes the damaging consequences of the virus on the IDCs and shapes the public's negative perception of the virus. As a result, the public is expected to support outbreak prevention and control emotionally and behaviorally. In the meantime, the *case* in (4) originally refers to the example of occurrence of something. However, here *case* belongs to "event-for-person metonymy." Specifically, it literally refers to 2,722 SARS cases but essentially refers to the number of people suffering from the infection. Similarly, *death* originally refers to the event of dying or departure from life, but here it is turned into the number of people who have died of the disease. This type of metonymy (7.35) occurs several times in SARS-related reports, where euphemisms are used to show respect for the patients and the deceased. In example (5), the symptoms of SARS are specifically listed to demonstrate in detail the negative consequences of SARS and reinforce the legitimization and necessity of epidemic prevention and control.

4.1.2 Analysis of the temporal proximization strategies

The lexico-grammatical items belonging to the temporal proximization and their frequency in the reports on SARS are represented statistically in Table 2.

Table 2: The use of temporal proximization strategies in SARS-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future	spread/increase/risk	38	1.86
Total		38	1.86
Modal verb phrases constructing continuous ODCs' impact between the present and the future	will/may/might/could/would	30	1.47
Total		30	1.47
Total temporal proximization		68	3.33

As shown in Table 2, nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future (1.86) and modal verb phrases constructing continuous ODCs' impact between the present and the future (1.47) are frequently used in all temporal proximization

strategies in SARS-related reports.

(6) And so long as China takes effective measures in treating SARS patients and prevents **the further spread** of the disease, the country is capable of maintaining the growth advantages of its economy, said Wang. (Apr. 29, 2003)

(7) Presently, the disease outbreak **will** not have a large negative effect on investment, but it **will** have some effect on domestic spending, especially the tourism and catering industry. (Apr. 29, 2003)

In example (6), the phrase *the further spread* presupposes the possibility of further spread of SARS and suggests no fixed time point at which such spread will occur. In this situation, the dangers posed by SARS can appear at any moment, and thus the public cannot take it lightly. In short, the use of *the further spread* exploits people's fear of the uncertainty of potential danger. Through this psychology, the general public become aware of the necessity of taking defensive measures and become more alert to the spread of the virus. In example (7), the word *will* demonstrates the negative impact of the epidemic on social life and enhances the legitimization of the fight against the epidemic through its negative effects.

4.1.3 Analysis of the axiological proximization strategies

The lexico-grammatical items belonging to the axiological proximization and their frequency in the reports on SARS are demonstrated statistically in Table 3.

Table 3: The use of axiological proximization strategies in SARS-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Noun phrases denoting positive values or ideologies of IDCs	investigation/findings/treatment/ research/measure/precautions/test reagent/test kit/vaccine/fund	252	12.35
	responsibility/respect/gratitude/ devotion/reverence/appreciation/ dedication/co-operation/support	39	1.91
	fight/frontline/day and night/ victory/war/campaign/brunt/ battle/defence/struggle	31	1.52
Total		322	15.79

Category	Lexico-grammatical items	Number of times	Frequency
Noun phrases denoting negative values or ideologies of ODCs	virus/coronavirus	103	5.05
	fear/concern/worry	27	1.32
Total		130	6.37
Total axiological proximization		452	22.16

From the data in Table 3, it is apparent that the media use various noun phrases to construct positive values of the IDC entities in the news related to SARS. Specifically speaking, a lot of terms show measures taken by the government, experts, healthcare personnel, and the public to actively respond to the outbreak of SARS (12.35), such as *investigation*, *findings*, *treatment*, *research*, etc. These words suggest that IDC entities do not give up in the face of threats from ODC entities and work hard to take steps to defend against entities outside the deictic center, which builds a positive image of IDCs. Many nouns that express good qualities of people (1.91), such as *responsibility*, *respect*, *gratitude*, *devotion*, *reverence*, *appreciation*, etc., are frequently employed. Through these terms, readers are aware of the government's duty in response to the epidemic, the medical personnel's selflessness, and the public's regard and admiration for the hospital staff. What's more, many non-hospital workers contribute to the battle in other areas. In this way, a positive and active atmosphere is created to fight the war. In addition to this, noun phrases connoting battles (1.52), such as *fight*, *frontline*, *day and night*, *war*, *battle*, and *defence*, are frequently utilized in the SARS-related news. Such terms construct the response to the outbreak of a war. In this war, healthcare workers are the warriors in the front line of the fight, which increases the public's aversion to ODCs and enables them to support epidemic prevention and control.

Meanwhile, the media capitalize on noun phrases to construct negative values of peripheral entities as well. The most frequently used expressions are *virus* and *coronavirus* (5.05). The virus is responsible for the emergence of the outbreak. At the same time, the word *virus* itself has a negative connotation. Firstly, a virus is a type of microorganism that can cause disease in people. Therefore, in the popular conception, it is a substance of an injurious nature. Secondly, some viruses are strongly contagious and thus are capable of eliciting even more negative evaluations, which further stimulates the negative image of SARS. For these reasons, the virus is both an ODC entity and a noun denoting the negative values of ODC when referring to the harm-maker in the corpus. The conflict of values is utilized to raise public awareness of the need to combat SARS.

4.2 Analysis of the proximization in COVID-19 news discourse

4.2.1 Analysis of the spatial proximization strategies

The lexico-grammatical items belonging to the spatial proximization and their frequency in the reports on COVID-19 are manifested statistically in Table 4.

Table 4: The use of spatial proximization strategies in COVID-19-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Noun phrases denoting IDCs	WHO/World Health Organization/ Europe/EU/Africa/world/Kinshasa/ the Democratic Republic of Congo/ Peru/Syria/the United States/ international community	583	27.88
	China/the Chinese government/ Wuhan Municipal Health Commission/Red Cross Society of China	336	16.07
	the public/the masses/people/we/ netizen/customer/tourist/vendor	292	13.96
	medical institution/medial worker/ medical researcher/doctor/ professional/expert/hospital	227	10.86
	meeting/school/kindergarten/ university/flight/private organization/ private sector/company/economy/ social development/food production/ transport/investment/market	178	8.51
	Wuhan/Beijing/Chaoyang/Guilin/ Hong Kong/Sichuan Province/Hebei Province/Tianjin Province/heavily stricken or remote area/Langfang city of Hebei	175	8.37
	patient/suspect/those who were in close contact with them	97	4.64
Total		1,888	90.28
Noun phrases denoting ODCs	outbreak/pneumonia/epidemic/cause of infection/new coronavirus/new virus	485	23.19
	claim/scam/misinformation/sanction/ conspiracy/false theory	56	2.68
	bacterial lung infection/HIV/malaria/ tuberculosis/Ebola virus disease/ SARS/MERS/the Spanish fever/ Marburg virus infection/snake flu	53	2.53
Total		594	28.40

Category	Lexico-grammatical items	Number of times	Frequency
Motion and directionality verb phrases referring to the movement of ODCs toward IDCs	spread/transmit/import/expand	28	1.34
	increase/rise/raise/climb	21	1.00
Total		49	2.34
Action verb phrases referring to the influence exerted by the ODCs on IDCs	infect/sicken/die/confirm/contract	90	4.30
	close/suspend/postpone/cancel/ban/ cause/spark/hit/affect/undermine/ distract/reduce/apply/swindle/fall/ establish	79	3.78
Total		169	8.08
Noun phrases indicating the anticipation due to the influence of ODCs on IDCs	risk/chance/transmission/spread/ potential victim	78	3.73
Total		78	3.73
Noun phrases indicating the result due to the influence of ODCs on IDCs	fatality/case/death toll/death	148	7.08
	emergency/spread/high-risk area/low-risk/medium risk	52	2.49
	symptom/fever/cough/sign/sore throat	29	1.39
	isolation/quarantine/observation	24	1.15
Total		253	12.10
Total spatial proximization		3,031	144.94

An examination of Table 4 reveals that the media make substantial use of the spatial proximization strategies (144.94) when reporting news about COVID-19. Multiple noun phrases are identified as the IDC entities. (1) Firstly, the most frequently utilized noun phrases are international organizations and some international place names (27.88). International organizations are dominated by *WHO*. International place names include *Europe*, *Africa*, *Congo*, *Kinshasa*, etc., which are all victims of COVID-19. The extensive employment of names of organizations and places outside of China intangibly broadens the scope of COVID-19's impact and builds a horizontal perception of the new coronavirus among the general public. It also emphasizes that COVID-19 is a disease spreading in China as well as worldwide, which increases the harmful effect of the new coronavirus. Ultimately, it highlights the severity of the situation. On this basis, the legitimization of anti-epidemic measures has been realized, which further enhances the general public's knowledge and implementation of these measures. (2) Secondly, China and its government agencies (16.07) appear frequently in the IDC camp, which suggests that the government, being fully committed to serving its people, not only plays a crucial role in

response to the epidemic but also is a victim of it. Highlighting China and its government agencies in the reports allows readers to understand that their country is affected by the epidemic. As a result, the masses could be more conscious of the dangers. The legitimization of epidemic prevention and control is guaranteed. (3) Thirdly, the general public (13.96) and some fields, institutions, and conferences (8.51) are located in the deictic center. They are representatives of ordinary people and affairs and thus can form a community of interest with readers, which implies that the epidemic is relevant to everyone and that it is not advisable to consider it personally. This discursive strategy creates a sense of fear in the minds of the public, which reinforces their vigilance against external dangers. (4) Lastly, medical professionals and medical institutions (10.86) in the IDC camp contribute the most to the fight against the epidemic. The advent of COVID-19 has greatly affected their lives and work. They worked day and night in their inconvenient protective clothing to save the lives of infected people. A positive image of healthcare can lead to better public support for the call to fight the epidemic.

The IDC entities are also involved with metonymy, employing location names to refer to citizens and employing government agency names to refer to authorities or personnel (12.24). In this type of metonymy, the individual characteristics of humankind are backgrounded, whereas the group characteristics of humanity are brought to the fore at a cognitive reference point, which allows people to relax when they recognize the seriousness of the situation and to be confident that they can defeat the epidemic under the leadership of the central government.

In the ODC camp, the expressions occurring most frequently are associated with COVID-19 (23.19), which reflects the antagonism between the public and COVID-19. In the ODC entities, the metonymy of *the disease* to refer to COVID-19 (1.96) is used to place the dangerousness of the new coronavirus in the perceived focus and to make people aware of the seriousness of the epidemic. After the general public learn that COVID-19 poses a direct threat to their lives, they will take concerted action against the epidemic. In addition to the new coronavirus, a common enemy faced by the whole world, some countries created certain negative words about China and spread rumors during the present pandemic. These terms (2.68) likewise appear several times in the ODC camp. The construction of such terms as the ODC entities not only clarifies China's innocence but also cautions the public against believing and spreading rumors. It is noteworthy that there are several references to other diseases (i.e., *bacterial lung infection, HIV, malaria, tuberculosis* in Table 4) in the reports on COVID-19, whose strategy reminds the masses of the negative

impact of the disease outbreaks on their lives and conveys the harmfulness of COVID-19.

The media also frequently take advantage of the action verb phrases referring to the influence exerted by ODCs on IDCs (8.08) and noun phrases indicating the result due to the influence of ODCs on IDCs (12.10) in coverage.

(8) He was sent to the hospital, where he was **confirmed** to have **contracted** COVID-19. (Apr. 22, 2020)

(9) Yoweri Museveni, Uganda's president has announced a raft of measures, including **sealing off** borders and **banning** all public transport, to contain the outbreak. (Mar. 7, 2020)

(10) On April 14, Beijing reported **an imported case** that resulted in **three more confirmed cases** among family members. It is categorized as **a concentrated case**, which is why Chaoyang was listed as **a high-risk area**, Pang said. (Apr. 22, 2020)

Example (8) uses verbs to express the effect of the new coronavirus on the patient in order to emphasize its influence on the lives of people. Likewise, example (9) utilizes verb phrases related to daily life to emphasize the impact of the new coronavirus on the functioning of society. The employment of verbs visualizes the harm brought by the ODC to people's lives, which makes readers feel the imminence of the ODC more intensely and warns readers against ODC. The negative image of COVID-19 is presented to the public. In example (10), the juxtaposition of the four noun phrases is used to make the sentence more powerful and influential, foreshadowing the imminence of danger. It also projects the patients' experience into the readers' mental space to arouse the readers' awareness to protect themselves, which reinforces the harmfulness of COVID-19. The use of *case* here is also the metonymy of event to refer to human (4.11).

4.2.2 Analysis of the temporal proximization strategies

The lexico-grammatical items belonging to the temporal proximization and their frequency in the reports on COVID-19 are shown statistically in Table 5.

Table 5: The use of temporal proximization strategies in COVID-19-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future	risk/transmission/threat/ spread	77	3.68
Total		77	3.68
Modal verb phrases constructing continuous ODCs' impact between the present and the future	will/could/would/might	31	1.48
Total		31	1.48
Total temporal proximization		108	5.16

As seen in Table 5, nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future (3.68) and modal verb phrases constructing continuous ODCs' impact between the present and the future (1.48) are capitalized on by the media in COVID-19-related reports.

(11) The World Health Organization (WHO) director-general said on Wednesday that measures being taken in the Chinese city of Wuhan to close down transport to limit spread of the new coronavirus showed commitment to minimizing **risks** locally and abroad. (Jan. 23, 2020)

(12) If we don't invest in both, we **will** face not just health consequences but the social, economic and political fallout that we're already experiencing in this pandemic. (May. 14, 2020)

In example (11), drawing on the abstract noun *risk* leaves room for the readers' imagination. In fact, the new coronavirus is still spreading. It presupposes that the infection may occur at any time and is likely to be ongoing if nothing is done to counteract it. Thus, this potential threat can make the general public aware of the need to respond positively to prevention and control of outbreak. The word *will*, in example (12), shortens the time distance between the hazards posed by COVID-19 and the IDCs, which presents a trend of ODCs constantly looming over the general public and provokes them to be alerted to COVID-19.

4.2.3 Analysis of the axiological proximization strategies

The lexico-grammatical items belonging to the axiological proximization and

their frequency in the reports on COVID-19 are displayed statistically in Table 6.

Table 6: The use of axiological proximization strategies in COVID-19-related reports

Category	Lexico-grammatical items	Number of times	Frequency
Noun phrases denoting positive values or ideologies of IDCs	notice/sanitizer/investigation/study/treatment/evidence/face mask/prevention//vaccine/measure/action/equipment/funding/preparedness/step	406	19.41
	commitment/praise/credit/solidarity/coordination/support/unity/ assistance	121	5.79
	health/human right/peace/stability/safety/dignity	49	2.34
	front line/fight/struggle/weapon	42	2.01
Total		618	29.55
Noun phrases denoting negative values or ideologies of ODCs	virus/coronavirus	200	9.56
	risk/challenge/threat/crisis/severity/difficult times/trouble/shock/cost/uncertainty/stigma/hate/confusion/disruption/prejudice/enemy	90	4.30
Total		290	13.87
Total axiological proximization		908	43.42

From Table 6, it can be seen that the media draw on a variety of noun phrases to construct values and ideologies of IDC entities and ODC entities. Among the values of the IDC entities, the words indicating measures appear most frequently (19.41), which suggests that the IDC entities are actively taking steps to undermine the intrusion by ODC entities. These words create a positive atmosphere for the prevention and control of the epidemic and make the public more willing to participate. Also, words indicating the good qualities of the IDC entities (5.79) and indicating the original state of IDC entities (2.34) are frequently employed. In the face of overwhelming epidemic violence, individuals unite together and help each other in unison. Words indicating the original situation of IDCs, such as *health*, *peace*, and *stability*, are utilized to contrast with the current condition. These words emphasize the magnitude and severity of the coronavirus's impact on the global and national societies, which further highlights the dichotomy between IDCs and ODCs.

While a large number of positive values are applied to describe IDCs, negative terms are also utilized to construct the values of ODCs. The most frequently used words to denote the values of the ODC entities are *virus* and

coronavirus (9.56). The coronavirus is the cause of all misfortunes. In addition, the word *virus* highlights the pejorative character of the ODC. Thus, consistent with the SARS corpus, the term *virus* belongs to both the ODCs and the words indicating the negative values of the ODC when referring to the emitter of the danger. There are also a variety of derogatory terms (4.30), such as *crisis*, *trouble*, *enemy*. These terms allude to the negative characteristics and mighty destructive power of the ODCs. The negative image created by the frequent utilization of these phrases contrasts sharply with the image created by the IDCs, which implies that the ODCs could pose a severe threat to the IDCs and increase readers' hatred and enmity toward the coronavirus. The foundation is laid to improve the need for epidemic prevention and control.

4.3 Comparative analysis of proximization strategies

4.3.1 Overall comparative analysis

From the statistical results, we can see that both SARS-related and COVID-19-related reports draw upon spatial proximization strategies, temporal proximization strategies, and axiological proximization strategies. Spatial proximization strategies followed by axiological proximization strategies appear most frequently in both reports. In contrast, temporal proximization strategies account for the smallest proportion of these strategies. This reflects the unevenness and consistency in the utilization of proximization strategies. Unevenness refers to the different frequency in the different strategies. Consistency refers to the fact that spatial proximization strategies are always utilized more often in the discourse while temporal proximization strategies are used less often. This is in line with Cap (2013), who has suggested that temporal proximization generally accounts for less, with its effect being achieved through perlocutionary effects.

The chi-square test revealed that the frequency of proximization strategies in COVID-19-related news is significantly greater than in SARS-related news ($\chi^2 = 256.063$, $df = 1$, $p < 0.05$). Following public health crises such as SARS and H1N1, the media gained a deep understanding of applying the news as a channel to make epidemic prevention and control measures indispensable.

Specifically, the spatial proximization strategies show a tremendous

difference between COVID-19 and SARS reports (χ^2 = 115.770, df = 1, $p < 0.05$), with the former being used more frequently. This demonstrates that the media place more emphasis on spatial proximization. The reason for this may be that spatial proximization itself is a three-dimensional space that allows readers to feel the imminence and threat of the ODCs, which produces a more pronounced legitimization and persuasive effect. Regarding the occurrence of temporal proximization strategies, there is a significant difference in the two corpora (χ^2 = 8.157, df = 1, $p < 0.05$), which displays an upward tendency. The temporal proximization strategies reduce the temporal distance between the virus and the masses, which moderately evokes fear in the general public and reflects the delegitimization of COVID-19 behavior. In terms of the frequency of axiological proximization, there is also a significant difference in the two corpora (χ^2 = 146.584, df = 1, $p < 0.05$), which also shows an increasing trend. On the one hand, it unveils that the media increasingly put emphasis on influencing readers unconsciously. On the other hand, it suggests that the public's moral quality is good, and the media are more confident in guiding readers in this subtle way.

4.3.2 Comparison and analysis of spatial proximization strategies

The chi-square tests of the various strategies among spatial proximization reveal that the occurrence of noun phrases denoting IDC entities is significantly different between the two corpora (χ^2 = 101.781, df = 1, $p < 0.05$), with IDC noun phrases in COVID-19-related reports being used significantly more than those in SARS-related reports. Similarly, there is a significant difference in the utilization of the ODC entities in the two news corpora (χ^2 = 13.480, df = 1, $p < 0.05$), with the ODC entities appearing more frequent in the COVID-19 news than in the SARS news. This reflects an increasing focus on the construction of images in the space and a growing awareness of the influence concerning the image of the victim at the deictic center and the image of the intruder outside the deictic center in the media so as to establish a spatial opposition between the two. The readers themselves are part of the image, so noun phrases denoting the image of IDCs and ODCs are more familiar to readers than other strategies in the spatial proximization strategies, which ensures the persuasiveness of the content.

After a statistical comparison between metonymic words in IDCs and ODCs, it is exhibited that there is no significant difference in the metonymy of using location to refer to residents and of using agencies to refer to officials or

staff (χ^2 = 1.791, df = 1, p > 0.05). The use of the "whole-for-part metonymy" about the disease is significantly different between the two sets of news (χ^2 = 19.003, df = 1, p < 0.05) and exhibits a decline in the frequency of metonymy. It is possible that COVID-19 was preceded by several outbreaks of infectious diseases, and the media attempted to focus on COVID-19 in their coverage by directly mentioning the name of this infectious disease. Moreover, the direct reference to COVID-19 makes it easier to inform the public of its harmful nature. Likewise, there is a significant difference in the metonymy of events referring to people (χ^2 = 19.100, df = 1, p < 0.05), which exhibits a decreasing trend. In fact, reducing the employment of euphemisms in reports is more conducive to the creation of an image of ODCs as a hazard.

A comparison of the verb phrases in the two news corpora demonstrates that there is no significant difference in the use of motion and directionality verb phrases referring to the movement of ODC toward IDCs (χ^2 = 2.742, df = 1, p > 0.05). In the same way, there is no significant difference in the frequency of action verb phrases referring to the influence exerted by ODCs on IDCs in the news items of the two topics (χ^2 = 0.025, df = 1, p > 0.05). However, in both corpora, the former (motion and directionality verb phrases) are obviously less frequent than the latter (action verb phrases) (1.62 < 7.94, 2.34 < 8.08). Compared to motion and directionality verb phrases, action verb phrases are more specific, which gives the readers a precise perception of the damage given to IDCs and an intuitive sense of the harms caused by ODCs. Therefore, the action verb is more likely to increase the tension of the public about the threat from the virus.

In relation to the noun phrases indicating the anticipation due to the influence of ODCs on IDCs and indicating the result due to the influence of ODCs on IDCs, a comparison reveals that noun phrases indicating the anticipation due to the influence in COVID-19 reports are used more frequently than those in SARS reports (χ^2 = 9.951, df = 1, p < 0.05). However, the noun phrases indicating the result due to the influence are not significantly different between the two sets of coverage (χ^2 = 0.294, df = 1, p > 0.05). In essence, the noun phrases indicating the anticipation due to the influence construct the imminence of ODCs on IDCs from a dual perspective (spatial and temporal perspective) to present the harmfulness of the virus more effectively.

4.3.3 Comparison and analysis of temporal proximization strategies

The comparison between the temporal proximization strategies in the two news

corpora (i.e., SARS-related and COVID-19-related reports) reveals that the occurrence of nominalized noun phrases presupposing the conditions about ODCs' impact to occur at any moment in the future is significantly different (χ^2 = 12.308, df = 1, p < 0.05), with the latter being used more frequently. In contrast, there is no significant difference in the modal verb phrases constructing continuous ODCs' impact between the present and the future (χ^2 = 0.001, df = 1, p > 0.05). It is more likely to arouse the public's vigilance by reminding them of the potential dangers.

4.3.4 Comparison and analysis of axiological proximization strategies

By comparison, it is demonstrated that the noun phrases denoting positive values or ideologies of the IDC entities present a significant difference between the reports of the two themes (χ^2 = 87.990, df = 1, p < 0.05), so do the noun phrases denoting negative values or ideologies of ODC entities (χ^2 = 57.623, df = 1, p < 0.05). What's more, both noun phrases are more frequently presented in COVID-19 reports. In this indirect way, the media make the readers feel the opposition between the values of IDCs and those of ODCs. Through such a strong contrast, readers will inevitably accept the positive values of the deictic center and resist the negative values of the ODCs, thus responding positively to the situation against the epidemic and achieving the purpose of news reports.

5 Conclusion

This paper has presented a comparative study of the proximization discourse strategies and use of metonymy in news articles on SARS and COVID-19 based on a small self-built corpus. The findings reveal that both proximization strategies and metonymic words are used in the coverage of public health emergencies across time, with spatial proximization strategies being the most prevalent and temporal proximization strategies being the least prevalent. The difference is that COVID-19 news coverage draws upon more proximization strategies, which suggests that the media are more skillful at effectively guiding the public during public health emergencies. In general, COVID-19-related news makes greater use of spatial proximization strategies. Specifically, in the spatial proximization strategies, the COVID-19-related news discourse

makes significantly more use of nouns that denote IDC entities and ODC entities. Furthermore, there is significantly more employment of noun phrases indicating the anticipation because of the influence of the ODC entities on the IDC entities. Among the expressions of the spatial proximization strategies, metonymic words are less employed in COVID-19-related news discourse. The number of the temporal proximization strategies is even higher in COVID-19 reports. In the axiological proximization strategies, the COVID-19 news articles make significantly more use of noun phrases denoting the positive values of the IDC entities and the negative values of the ODC entities.

These results suggest that the media were much more proficient during the COVID-19 period, as seen by their capacity to effectively take advantage of discursive strategies in the fight against the epidemic through the press and to reasonably persuade the public to heed the government's call for more prevention and control. Furthermore, utilizing these discursive strategies in news reporting has created an image of China as a responsible power in the international community. Overall, the proximization strategies and metonymy have positively contributed to this public health emergency.

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