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## A MEDIATED ACCOUNT OF CORONA LANGUAGE

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**Abstract:** This research explores how language mediates Corona or Covid-19. To find out this phenomenon, a few Corona-related words, phrases, and structures are put into discussion. The paper, also, draws on the languaging of Corona, as a global disaster, with a highlight of the practices, attitudes, and discourses expressed over this disaster. First, the paper introduces a generic exposition on the various aspects of global disasters in terms of linguistic structures, which are all supported by some previous researches. Then, a broader interpretation of how language mediates Corona is elaborated. Finally, the paper states a few findings, conclusions, and further areas of research. Language plays a significant role in shaping disasters, and in this concern, the paper revealed that Corona pandemic is highly mediated at the lexical, meta-linguistic, and conceptual levels. Additionally, relating Corona to meta-linguistic aspects can underline a media-catastrophe link, one that may be worth a broader and further investigation.

**Keywords:** *corona, discourse of pandemics, media and catastrophes, mediated analysis.*

## INTRODUCTION

Language is integral part of our life. It plays an indescribably significant role in conveying what we say and what we do. though what we say is often irrelevant, meta-linguistic aspects prove otherwise. Since language is instrumental in human communication, there has always been a connection between saying and doing, especially concerning catastrophes we encounter, be natural or others. Human feelings driven by catastrophes are reflected in verbal utterances which in turn suggest panic, fear, and discomfort. This paper, therefore, attempts to highlight the verbal part of human panic about global catastrophes, namely pandemics, more specifically, Corona or Covid-19.

Most previous studies in this respect have focused on analyzing panic or threat as the link between crises and effects. When a natural disaster emerges, the focus is not only on the people affected but also on the way or mode they are affected by. Accordingly,

several investigations raised the issue of the fear factor in dealing with disasters. In other words, they have eyed disasters through the media lens, or how the news reports fear and panic. Cottle (2011) thinks that world-wide disasters can cause large-scaled damages and crises, where people can look at these crises from the panic point of view with the effect embodied in threats and fears. He states that “in the world’s formations and flows of news, diverse crises have variously become signaled, symbolized, and rendered silent, and for many of us this is where they are first encountered and become known’.”(p.78)

Linguistically, disasters are phenomena that are rich in language-related elements, including discourse, vocabulary, and media rhetoric. In this taken, Rosa (2018) believes that there is a vocabulary of fear making journalists, reporters, and other media communicators careful in selecting the words, adjectives, and phrases that fit the situation. Accordingly, they use certain vocabulary items capable of reporting fear and panic among the public. Devès et. al. (2019), also, have raised this issue, that of using panic- and fear-related adjectives and words in media-reported catastrophes. They claime, “during the phase of coverage dedicated to impacts, we observe a tendency toward sensationalism. Almost half of the news items use adjectives such as “devastating”, “powerful”, “catastrophic”, “enormous” “dramatic”, “monster” or “violent”, emphasizing the extent of the devastation.” (p.136).

Some previous studies have further addressed the mediation of catastrophes and disasters in news discourse with respect to the country-wide fear or panic. Fowler (1991, p.148), for example, says,

“since expressive systems are shared among members of a community, hysteria can be inter-subjective: mass hysteria. Once established in the discourse of the media, it persisted autonomously within that discourse. Because media or mediation is the principal element in the coverage of disasters and catastrophes, news controls the discourse of fear and panic and presents this aspect to the public in a mode that is often undesirable, sensitive, and critical. And as Tomlinson (1991) argued, "media is the dominant representational aspect of modern culture, but its meanings are mediated by the ‘lived experience’ of everyday culture."

Certain recent investigations, such as that of Altheide and Michalowski (1999), Barker (2001), and Silverstone (2002), emphasize the link between fear and human communication in terms of mediation or more specifically, disaster mediation. that is how disasters are mediated in news or media and how people react to this mediation. Altheide and Michalowski (1999) believe that fear plays a significant role in shaping today’s

culture, news, media, and communication, not only because the word “fear” is dominant in various walks and aspects of human communication but also because contemporary media construct disasters in remarkably discursive reports. The authors based their finding on the proposition that newspapers shape a discourse of fear in their topic coverage, claiming that such discourse has made fear a prevalent topic in newspaper reports, has raised public concerns over the social, political, and economic stances produced as a reaction, and has created a risk-free society. Barker (2001, p.8) pays thorough attention to mediation, claiming that textual analysis alone is insufficient for a domain of study that calls itself cultural studies. The study of texts and the study of audiences can felicitously be done together. Indeed, the talk produced by audiences about texts is another form of the text so that the study of culture involves the relationship between different types of text. Silverstone (2002,p.4) finds that “Only catastrophes can interrupt the flow and the order of media representation. Only interruptions of that order and flow can be considered catastrophes.”

## **REVIEW OF LITERATURE**

Several previous studies have discussed the mediated languaging of catastrophes and disasters, especially concerning communication and human response. Arguin et al. (2004) believe that communication, mainly electronic media, have helped spread knowledge and awareness concerning the risks of the infectious disease SARS. The researchers, additionally, add that the established pre-knowledge of diseases and dangerous pandemics among the population matter during catastrophes, and it is quite noticeable in media. Supported by the guidelines, advisories, and instructions of disease centers relating to disease outbreaks and prevention, electronic media have changed the way persons approach catastrophic and immanent diseases before it is too late. The more information concerning outbreaks people obtain, the sooner outbreaks are controlled.

Kittler et al. (2004) investigates the risks arising from threats and outbreaks of infectious diseases, like SARS highlighting the challenges facing the effective communication of accurate health information to the alarmed public. They find that the respondents trust information given by physicians, health care professionals, and other medical sources. such as health websites, that are more trusted than the traditional media outlets, such as TV channels, newspapers, news reports, and magazines. Those

respondents, further, state that they searched the internet for the latest news on SARS, biological threats, anthrax, and other highly fatal diseases. Kittler et al. adds that respondents trusted physicians more than the other sources because the physicians delivered reliable information.

Wallis & Nerlich (2005) discuss the metaphorical language of the coverage of the severe acute respiratory syndrome, known as SARS, in the British media during the epidemic outbreak in 2003. They find that the discourses of disease and bio-risks are loaded with military terminology due to the political control of the media and the governments' approaches to politicize catastrophes. Political and military developments at that time played a significant role in the mediated metaphorical conceptualization of SARS as a military enemy.

Thompson & Nowak (2007) believe that media should serve as a transparent educator about emerging diseases and flu outbreaks by disseminating the knowledge and information needed. They, however, admit that political, social, and sometimes scientific challenges and obstacles often prevent the spread of that knowledge. Holmes (2010) investigated the preparation plan set by Canada's British Columbian health authority in countering the pandemic flu. The study relates scientific informedness to the public audience through a communicative-medical narrative, how the audience reacted to the state-sourced information as detailed in newspapers, and what strategies the media used in representing the flu outbreak and spread. The author, finally, found the health authority succeeded in defining the outbreak, communicating the flu updates to the audience, and covering the crisis in media.

Priyadarshni (2016) investigated conceptualized metaphors used in media reports, namely Malaysian newspapers, covering the outbreak of the H1N1 influenza pandemic which spread in 2009 in several Asian nations. The author found that related newspaper reports helped shape the construction and conceptualization of the influenza outbreak, risks, and aftermath and that the nation-wide procedures to control the pandemic control reflected the dominant way of risk assessment and danger containment. Garoon & Duggan (2018) highlight how counter-influenza pandemic national and World Health Organization plans have been represented in media through the discursive structuring of preparedness. The authors applied a discourse-based methodology to consider the consequences of the pandemic on both the experts and interviewees. They found that

ethical considerations played a key role in the shaping of the pandemic outbreak and prevention.

Laidlaw (2019) investigated the journalistic coverage of the H1N1 virus and how print headlines lexicalized the outbreak in different terms, stating (p.435/436) " The usage of the term "H1N1" in the text search procedures covered some variants in the name of the causative virus, and "swine flu" was the common name for the virus preferred by the media. Media coverage from April 24 to April 29, 2009, encompasses more than 3,000 Canadian print and broadcast items." Ogbodo et al. (2020) examines the global media framing of Corona attempting to realize the catastrophic effect of mediated framing of the pandemic on the audience's response and reaction. The authors find that media use lexical and psychological elements that contribute to the formation of precaution, warning, risk-taking, and imminent danger. The way the media cover the pandemic has made Corona a moral hit among the masses. Many of the words are used during the pandemic (Fitria, 2021). Ro (2020) elaborates the lexicalization of Corona-related words and phrases, saying "Many of the newly popular terms relate to the socially distanced nature of human contact these days, such as 'virtual happy hour', 'coveideo party' and 'quarantine and chill'".

## **METHOD**

The sourced of data in this paper is English-speaking news sources, mainly websites. All relevant data are taken from the related sources published since the beginning of the Corona outbreak to date. No specific linguistic tools or approaches are followed here, but the research in analysis focuses on several key thematic elements. The research also draws on discourse analysis in analyzing the related texts. Additionally, the paper highlights the role of the media in shaping, representing, and conceptualizing Corona. In other words, it describes how mediation paraphrases catastrophes.

Various discourse and linguistic tools are customized to frame a single topic-informed analysis. The research, accordingly, combines discourse elements, including othering, politicization, ethnicization, metaphor with linguistic elements, such as transitivity, mood, modality, vocabulary, and functional elements such as cohesion and address. The researcher's eclectic analytical framework is derived from Barker's (2001) discourse approach (transitivity, vocabulary; mood; metalanguage; modality; address;

and cohesion), Richardson's (2007) rhetorical tropes (hyperbole, metaphor, metonym, neologism, and puns), in addition to the two proposed elements; politicization and ethnicization.

## FINDINGS AND DISCUSSION

To better understand how language shapes Corona and how Corona is reported in media, a multiple-theme analysis has been synthesized. This analysis draws on several linguistic and discourse-based elements. These elements include politicization (to render linguistic expressions which are political for various motives), vocabulary (how neologisms are created, meanings are generalized, and lexical elements are fashioned), modality (how grammatical elements gain meta-linguistic intentions), metaphorization (how similitudes are used and manipulated), othering (how to emphasize the negative elements of the others), ethnicization (how to stigmatize certain races or different ethnicities), transitivity (how the sentence elements are emphasized), mood (how sentences vary), address (how to highlight titles and other personal prefixes), and cohesion (how to link linguistic elements).

**Table 1. A Theme-based Analysis of Corona Languageing**

Theme	Sample
<b>Politicization</b>	Trump believes vaccines will be ready this year Corona is politically manipulated in media as for origin, vaccine performance, case surge and control
<b>Vocabulary, Neologism, Lexicalization</b>	Covidiot MP condemned after trip of shame Could social distancing of less than two metres work? Authorities across Africa brace for pandemic Up to 30% of Coronavirus cases asymptomatic Covid panic buying: Warning for shoppers in Wales Covidiots criticized on Tui quarantine flight New China virus spreads to US How to shop safely in a Coronavirus pandemic
<b>Othering</b>	We have better vaccinations vs. Their vaccine is not working We report less infection cases than this or that country Corona variants in that country are more dangerous
<b>Modality</b>	Hospitals across UK must prepare for Covid surge Lockdown 'must become the social norm One in 200 Britons 'is infected with Coronavirus' but spread may be slowing. Coronavirus could be contained locally, says chief medical officer. One in 10 worldwide may have had virus, WHO says French Coronavirus lockdown should last at least six weeks
<b>Ethnicization</b>	Wuhan virus continues China's lockdown South African variant (of Corona) New China virus spreads to US
<b>Metaphorization</b>	Global stocks plunge as Coronavirus fears spread

	Corona Covid-19
<b>Transitivity</b>	Mayor of Middlesbrough does not accept new covid restrictions. 10 million download NHS covid-19 app despite glitches. Boris Johnson blames rising Coronavirus infection rate on UK's fraying discipline Health officials fear de-prioritising of Covid testing in care homes in England Nicola Sturgeon tells MP to quit after taking Covid to Westminster
<b>Mood</b>	Test centres forced to turn away patients referred by GPs
<b>Address</b>	Prince Charles tests positive for Coronavirus NY governor says infection rate worse than feared Thai leader to invoke emergency powers as virus infections climb
<b>Cohesion</b>	Boris Johnson apologizes for not understanding new rules in North East Trump flown to hospital after Covid-19 positive test More than 750 students self-isolating after testing positive for Covid-19 Covid-19 has legitimised once-radical ideas in UK India announces 21-day lockdown as global confirmed cases top 400,000

## Findings

Based on the analysis, the findings of this research are elaborated as follows. First, news and media use various linguistic techniques and strategies in describing or covering Corona. There is a considerable manipulation of Corona especially at the political level, which can be noticed in the Corona-related statements, stances, and news delivered by politicians and governments. Some news covering Corona, especially those stated by governments or political bodies, show that these are more of a claim than a fact. Besides, they are interferences in the scientific and medical fields.

## Discussion

The previous analysis shows that language is the key aspect in the mediation of catastrophes, as represented here by Corona. While words may describe things, news, on the other hand, can shape concepts. News or any media-sourcing outlets mediate catastrophes by shaping concepts, creating frames, and setting mediated ecologies. Politicization stands for Corona as a politicized disaster, wherein politically-motivated agendas compete for various ends. In the mediation of Corona, news shows that governments, leaders, or political regimes can make or produce quick-treatment vaccines, that some governments provide vaccines that outperform others, and that leaders pledge vaccine provisions as soon as possible. Corona, here, is not only the disaster, but it is also the advantage upon which stakeholders manipulate their ends.

In terms of vocabulary, Corona mediation provides a wide range of lexical and linguistic richness, represented by new vocabulary or neologisms (e.g. covidiot),

extended meanings (e.g. social distancing), and frequent usage (e.g. pandemic). Media and news frequently use the same words and phrases when covering Corona-related events.

In othering, the other is purportedly focused on. The other is always different from the self which makes him the target of criticism, analysis, and coverage. The mediation of Corona in news proves that everything in the other is different. In media, reports state that their vaccines are not as effective as others', that they have higher infection cases than others, and that they develop different variants of Corona than those found here and there.

Modality is the construction of ways or modes as depicted in the behaviours, acts, processes, practices, and attitudes of a certain party or people. Linguistically, modality varies in degree and therefore in action. it may signal possibility, probability, improbability, advisability, necessity, contingency, and restriction. Modality is also expressed by verbal forms or modal verbs including may, can, must, should, and the like. Modality in media discourse is concerned with the perception of events and actions as interpersonal attitudes and behaviours on the part of the relevant agencies. It also contributes to the formation of frames in media. Frames are the discursive construction of mediated communication. In the coverage of Corona, media discourses shape the pandemic in frames of expressions that can be cautious, open, intentional, certain, or probable.

Ethnicization is ascribing racial or ethnic characteristics to a certain place, group, or party to construct a specific identity to that place or person. Eder et al. (2002:p.17) define ethnicization as "chain of events through which objective conditions of economic or political grievances become the basis of political claims justified by reference to a collective identity." Media discourses often shape imaginations about others to de-emphasize the difference and to ascribe identities to them. Such different construction of identities is often based on the attribution of single events as caused by the whole respective one. In other words, a single action is attributed to a collective group. Ethnicization as a mediated process of discourse has been taken advantage of in the news covering Corona. Corona is described in news as the Wuhan virus, China virus, Chinese virus, and Asian virus.



Metaphorization is the process of using verbal images or figures of speech to compare, assimilate, and reshape concepts, ideologies, and imaginations. The choice of words in metaphors may be subject to the targeted concept. Metaphorization in media is constructed out of the identities through which meanings and intentions are communicated. In the Corona outbreak, metaphorization has been used to contrast images and reshape concepts. Corona in media discourse is manifested as an animate actor that is capable of so and so. Additionally, the events that accompany the Corona outbreak, such as infection cases, economic setbacks, counter-measures, and health issues are all accommodated in the mediation of fear and panic. Eventually, all these factors jointly construct metaphorical images the purpose of which is to create linguistic images and figures.

Transitivity is the authority or agency of actions in discourse. It is the linguistic choice of actors and receivers in the course of actions. This choice is based on the selection of power and agency. In media discourses, especially in those concerned with disasters and catastrophes, words expressing transitivity and agency are selected carefully due to the consequent effects represented by meanings and intentions. Beard (2000) observes that in the modern world of today, transitivity is believed to be one of the most influential ways of evaluating effectively the ideological underpinnings present in a text; transitivity evaluates language to find out the happenings, participants and the circumstances present in a clause. However, Fowler (1991) thinks that roles in media discourse are always understood from the participants involved by the one which/who is affected and the one which/who is the agent or causer, in which case the agents are transitive while the recipients are affected. In the mediation of Corona, Corona is either the cause of action or the receiver of the action. Though no accurate statistic figures and percentages are available and as this research is not quantitative, it seems that the news covering pandemic has mostly made Corona the cause of action.

Mood is the discursive atmosphere of expressions and attitudes behind which intentions and implications are set. The linguistic and semantic relations in sentences and texts are intended to convey attitudes, stated in media discourses concerning catastrophes and disasters. Mood also helps readers understand and analyze the texture of meanings and actions related to the themes involved in a text by drawing on the causes, emotions, and relations. Aijmer (2015) states that lexical and verbal expressions of mood can

communicate various meanings (from urging, warning, advising, demanding, to permitting, to I think, probably, and certainly, be urged, be permitted, be warned, be advised, be decided, be informed, be reminded, be assured, and be allowed). The communication of meanings fulfills a functional significance in a text that is the manifestation of messages and stances. In the mediation of Corona, news introduced linguistic forms of multiple stances and messages without explicitly stating the causing actors or affected parties.

Address is the explicit use of titles, formal or specific, in naming the others directly or indirectly. Address is concerned with the establishment of relations between participants in discourse or text, and they are employed for various reasons, for example, to highlight participants or agents, to emphasize affected agents, or to attribute causes or actions to specific agencies. In the news covering Corona, address is employed to name agents and to specify causes. The causes here refer to the human agents who are demonstrated in news discourse to manifest relations. To build abstract relations between actors and causes, news uses address forms to shift focus and to draw readers' attention to certain actions and causes. Clayman (2010) believes that address terms are utilized in discourse for personalization of agendas, that is to mark a departure from causes to actions, thereby serves as carriers of meaning rather than ordinary naming titles.

Cohesion is the linguistic building-up of meanings and structures within texts and discourses at the lexical, sentential, and meta-discursive levels. Halliday and Hasan (1976) define cohesion as the "non-structural text-forming relations" (p.7). So, cohesion is the semantic connection of implicit relations with texts and sentences without which no logical connection can be inferred from them. In the mediation of Corona, cohesion is achieved by the establishment of cause and effect, as in;

- More than 750 students self-isolating after testing positive for Covid-19
- Boris Johnson apologizes for not understanding new rules in North East agent and recipient, as in;
- Trump flown to hospital after Covid-19 positive test

And reference, as in;

- Covid-19 has legitimised once-radical ideas in UK
- India announces 21-day lockdown as global confirmed cases top 400,000

## CONCLUSIONS AND SUGGESTIONS

### Conclusions

This is a short discussion on the role of media in shaping disasters as manifested in the news covering Corona. This research stands as an attempt to understanding Corona as a mediated phenomenon through the eyes of media discourse. The mediated analysis of Corona paves the way for a link between language and disasters. Though this paper is short in defining the mediated analysis of Corona, it introduces a breakthrough in understanding the relationship between language and catastrophes., .i.e., how language mediates catastrophes. Biased media played a key role in the way Corona is introduced and shaped to the public. Additionally, misinformation, infodemic, and outbreak surge have contributed to Corona languaging through the linguistic manipulation of words and expressions.

### Suggestions

In terms of translation, further studies may contribute to Corona languaging by finding target-counter parts for the English coroneologisms in other languages. Discourse can also benefit from Corona languaging, for example by interpreting the speech acts, intentions, and conditions implicated in Corona-related discourses. Corona languaging can additionally be searched through other aspects, such as multimodality, text analysis, and visual analysis. Researchers are invited to investigate how language is related to catastrophes, disasters, and global crises, especially through the mediation and newsworthiness of catastrophes.

## REFERENCES

- Aijmer K (2016). Modality and mood in functional Linguistic approaches. In Nuyts, J. and van der Auwera, J. (eds.). *The Oxford Handbook of mood and modality*. Oxford: Oxford University Press, (pp.495-513).
- Altheide, D.L., and Michalowski, R.S.(1999). Fear In The News: A Discourse of Control. *The Sociological Quarterly*, 40:3 (475-503).
- Arguin, P.M., Navin, A.W., Steele, S.F., Weld, L.H., and Kozarsky, P.E. (2004). Health Communication During SARS. *Emerging Infectious Diseases*, 10:2 (377-380).
- Barker, C. (2001). *Cultural studies and discourse analysis*. London: Sage.
- Beard, A. (2000). *The language of politics*. London: Routledge.
- Clayman, S.E. (2010). Address terms in the service of other actions: The case of news

- interview talk. *Discourse and Communication*, 4:2 (161-183).
- Cottle, S. (2011). Taking global crises in the news seriously: Notes from the dark side of globalization. *Global Media and Communication*, 7:2 (77-95).
- Devès, M.H., Le Texier, M., Pécout, H., and Grasland, G. (2019). Seismic risk: The biases of earthquake media coverage. *Geoscience Communication*, 2 (125-141).
- Eder, K., Giesen, B., Schmidtke, O., and Tambini, D. (2002). Collective identities in action: A Sociological approach
- Fowler, R. (1991). *Language in the news: Discourse and ideology in the press*. London: Routledge.
- Fitria, T. N. (2021). Word formation process of terms in COVID-19 pandemic. *Leksika: Jurnal Bahasa, Sastra Dan Pengajarannya*, 15(1), 18-26. <https://doi.org/10.30595/leksika.v15i1.9248>
- Garoon J.P. and Duggan, P.S. (2018). Discourses of disease, discourses of disadvantage: A critical analysis of National Pandemic Influenza Preparedness Plans. *Social Science and Medicine*, 67 (1133-1142).
- Halliday and Hasan (1976). *Cohesion in English*. London: Longman.
- Holmes, B.J. (2010). *Constructing the coming plague: A discourse analysis of the British Columbia Pandemic Influenza Preparedness Plan*. PhD Thesis. Simon Fraser University, Canada.
- Kittler, A.F., Hobbs, J., Volk, L.A., Kreps, G.L., and Bates, D.W. (2004). The internet as a vehicle to communicate health information during a public health emergency: A survey analysis involving the Anthrax scare of 2001. *Journal of Medical Internet Research*, 6:1 (1-8).
- Laidlaw, T. (2019). Pandemic stories: Rhetorical motifs in journalists' coverage of biomedical risk. *Minerva*, 57 (433-451).
- Ogbodo, J.N., Onwe, E.C., Chukwu, J., Nwasum, C.J., Nwakpu, E.S., Nwankwo, S.U., Nwamini, S., Elem, S., and Ogbaeja, N. I. (2020). Communicating health crisis: A content analysis of global media framing of COVID-19. *Health Promotion Perspectives*, 10:3 (257-269).
- Priyadarshni, R.L. (2016). *Metaphors of illness in newspaper reports in a Malaysian newspaper*. Master Thesis, Universiti Putra Malaysia.
- Richardson, J. (2007). *Analysing newspapers: An approach from critical discourse analysis*. Hampshire, UK: Palgrave MacMillan.
- Ro, C. (2020). Why we have created new language for Coronavirus. Blog retrieved on

November, 3, 2020 at <https://www.bbc.com/worklife/article/20200522-why-weve-created-new-language-for-Coronavirus>

- Rosa, G. P. (2018). How a small-scale panic turns into an unstoppable news wave about mass mugging on the beach. In Vasterman, P. (ed.). *From media hype to Twitter storm: News explosions and their impact on issues, crises, and public opinion*. (pp.187-208), Amsterdam: Amsterdam University Press.
- Silverstone, R. (2002). Mediating catastrophe: September 11 and the crisis of the other. PDF File Retrieved on December 15, 2020 at [https://infoamerica.org/documentos\\_pdf/silverstone07.pdf](https://infoamerica.org/documentos_pdf/silverstone07.pdf)
- Thompson, D. and Nowak, G. (2007). *Communicating news of an outbreak: How best to get information out to the public in ways that are trustworthy and timely*. Nieman Reports, Spring, 2007, 73-76.
- Tomlinson, J. (1991). *Cultural imperialism*. London and New York: Continuum. Wallis, P. and Nerlich, B. (2005). Disease metaphors in new epidemics: The UK media framing of the 2003 SARS epidemic. *Social Science and Medicine*, 60 (2629-2639).