Athens Journal of Mass Media and Communications

Front Pages

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The current issue is the first of the tenth volume of the *Athens Journal of Mass Media and Communications (AJMMC), published by the Mass Media & Communication Unit of ATINER.*

Gregory T. Papanikos
President
ATINER

Athens Institute for Education and Research
A World Association of Academics and Researchers

23rd Annual International Conference on Communication and Mass Media, 13-16 May 2024, Athens, Greece

The Mass Media & Communication Unit of ATINER organizes its **23rd Annual International Conference on Communication and Mass Media, 13-16 May 2024, Athens, Greece** sponsored by the Athens Journal of Mass Media and Communications. The aim of the conference is to bring together academics and researchers of Communications, Mass Media and other related disciplines. Please submit a proposal using the form available (https://www.atiner.gr/2024/FORM-MED.doc).

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- Submission of Paper: **15 April 2024**

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The Diffusion Speed of Good vs. Bad News in Geopolitics

By Stephan Unger[*] & Jacob Akey[±]

This article investigates the dissipation speed of positive and negative news in a geopolitical context. We perform a sentiment analysis of geopolitical news and measure the gamma of the corresponding sentiment scores per time unit in order to compare the travel speed of news with positive sentiment scores with news having negative sentiment scores. While prospect theory suggests that bad news is perceived as more impactful than good news, we show that this does not necessarily hold for the travel speed of news. On the contrary, we find that good news linked to keywords, which have usually a negative association, travel faster than bad news, and vice versa; a seeming repudiation of folk wisdom. Since our use cases were geopolitical crises, we associate phrases connected with conflict or the potential for conflict to have a broadly negative association. The implications of our insights suggest that the dissipation speed of news can be improved by framing and releasing positive news about events or entities with a negative association.

Keywords: sentiment analysis, sentiment score, sext mining, geo-politics, news flow

Introduction

Sentiment analysis (STA) is difficult because human language is complex. Consequently, individual analyses are untrustworthy. This does not, however, mean that STA is without worth. Individual outcomes may be corrupted, but it is in the large numbers and datasets where truth can be found. To this end, we analyze 7,022 English language publications divided into 23 country and keyword pairings connected to contemporary geopolitical crises. With this information, we seek to determine whether, as the idiom suggests, that news which contains negative sentiment dissipates faster than that which contains positive sentiment. Or, to speak plainly, does bad news travel faster than good?

We speak in hyperbole and metaphor, use sarcasm and colloquialism, and fall into anachronism and oxymoron. To draw sentiment from language is difficult; to do so perfectly is superhuman. A series of natural language processing (NLP) models have been built to do just that, to approximate the human ability to assign emotional value to word combinations, but to do so faster and cheaper than a hired hand might. The problem, evident in the STA literature, is that the results of analyses are often difficult to interpret. They appear stochastic to the naked eye. The imperfection of individual sentiment scores has proved a persistent barrier to applying sentiment analysis to the social sciences. For example, at this moment, sentiment analysis is too blunt a tool to be used for rhetorical criticism. However,

[*]Associate Professor, Department of Economics and Business, Saint Anselm College, USA.
[±]Graduate Student, Saint Anselm College, USA.

there has been somewhat of a failure of imagination on this front. If a single sentiment analysis cannot be relied upon to tell us anything useful, then what about 100 analyses? Or 10,000? When dealing with a large data set, patterns emerge.

A solvable problem, pattern-wise, is how sentiment moves. A significant percentage of inputs are negative, another portion is positive, and that which is neither has no sentiment; it is neutral. As time progresses, and new language is available to analyze, the prevailing sentiment changes. One day all is sunshine and kittens, the next there is a dark and stormy night. Sentiment, like New England weather, changes frequently over even short periods of time. To test whether sentiment becomes less positive or more negative faster, we draw a sample of sentiment from contemporary geopolitical crises. While sentiment could have been drawn from English language publications on any topic, we were hopeful that STA could tell us about the crises as well as be studied on its own.

The keywords we used to find publications are based around four primary country pairs China-Taiwan, Saudi-Arabia-Iran, Turkey-Greece, and Germany-Ukraine. All four pairs have been associated with a headline-grabbing geopolitical crisis during the period where data was collected. Each pair was then associated with one unique keyword, and two shared keywords across all four pairs. China-Taiwan was linked to the term "Microchips." Saudi Arabia-Iran was linked to the term "OPEC." Turkey-Greece was linked to the term "Eastern Mediterranean." Germany-Ukraine was linked to the term "Natural Gas." Publications relating to "U.S. Aircraft Carrier Deployment" and "Nuclear" linked to the four country pairs were also collected. Each keyword- Microchips, OPEC, Eastern Mediterranean, Natural Gas, U.S. Aircraft Carrier Deployment, and Nuclear- was also analyzed separate from any country pair as a sort of control group. This allows us to test hypotheses such as if news on microchips generally changed sentiment differently from news directly connected to China-Taiwan. We also collected publications sans keyword on former Yugoslav Republics: Serbia, Kosovo, North Macedonia, Montenegro, Bosnia and Herzegovina, and Croatia. These countries were not looked at independently but as a sextuple pairing (as opposed to a country pair). Our country pairs all posed the possibility of violence during data collection, but our keyword pairings are split between terms connected with violence and those not. We associated "U.S. Aircraft Carrier Deployment" and "Nuclear" with violence. "Microchips," "OPEC," and "Natural Gas" were associated neutrally, and "Eastern Mediterranean" was associated positively (the impact of this association is indeterminate).

We organized our use cases like this for two reasons. The first, as previously stated, is to see whether positive sentiment diffuses at a slower rate than does negative sentiment, and if it does not do so universally, under which circumstances does it. The second, is to see if this type of research can be done. The crudity of sentiment analysis is an immense barrier to its use for anything but market research. By building a novel dataset and relating it to a social-scientific scenario (geopolitical crises), we hope to serve as a proof of concept for STA's application to broader issues. To accomplish the aforementioned tasks, we will first discuss previous uses of sentiment analysis and attempts to measure if bad news travels

faster than good news in the next section, followed by our description of our methodology and data. We then present our results, and finally we conclude.

Sentiment Analysis

Sentiment Analysis as a Tool

We will next provide a short historical overview of the sentiment analysis (STA). Despite the topic's rapid growth, it is quite possible to summarize its application with appropriate parsimony; STA is quite new. Bibliometric analysis demonstrates that academic studies of or using STA are a mostly post-2010 phenomenon. It is also a largely Chinese specialty, with more publications coming out of the People's Republic than the U.S. (Micu et al., 2017). We will note that quantity is not necessarily indicative of quality.

STA is the "tools and other lexical resources for analyzing texts (Ahlgren, 2016)." It sits awkwardly at the intersection of radically diverse fields due to its newness, complexity, and broad, if not straightforward, applications. STA is an attempt to quantify the emotional context of communication; a task of interest to linguists, which requires the use of software, working on a set of problems most at home in mathematics and logic, which sees application in marketing (Rambocas & Pacheco, 2018). Research in both marketing and other areas of interest has often taken place through analyses of tweets on the microblogging site Twitter. For example, using a rudimentary sentiment coding process, Naveed et al. (2011) studies how positive or negative sentiment in a tweet affects the diffusion of that tweet through retweets. They found that tweets containing emotional value were more likely to be retweeted and that positive tweets were shared more often than negative ones (2011). In recent years, Twitter has become a hotbed for novel STAs, and we would recommend looking to Giachanou and Crestani's "Like It or Not: A Survey of Twitter Sentiment Analysis Methods" for a more complete breakdown of several dozen attempts at STA on Twitter (Giachanou & Crestani, 2016).

Aside from analyzing tweets, an obvious application of STA for the social sciences is quantitative rhetorical analysis, and an obvious subject of this analysis is State of the Union Addresses (SOTUs). Constitutionally mandated ("He shall from time to time give to Congress information of the State of the Union and recommend to their Consideration such measures as he shall judge necessary and expedient (U.S. Const. art. II, § 3)."), the annual addresses have been given both orally and through letters, but the addresses are ideal objects of study because they are digitized, connected to historical figures for whom there is significant public information, and connected to specific periods of US history where information on war, the economy, and public mood can be accessed. There is also a substantial enough dataset to be useful; there are well over 200 SOTUs. The exact number is controversial because of addresses given to congress outside of the modern late-January timeframe of SOTUs. President Bush's post-9/11 address is an example of this. He addressed a joint session of congress in late September of 2001, declaring

"In the normal course of events, Presidents come to this chamber to report on the state of the Union. Tonight, no such report is needed. It has already been delivered by the American people (Bush, 2001)." It is unclear whether the President's September 20th address fulfilled the constitutional mandate. Regardless, SOTUs make ideal subjects for STA.

We are aware of three sentiment analyses that have been conducted on complete SOTUs. The first, conducted in 2015, is from data-based-consultancy firm M&S Consulting. They have not publicly released the entirety of their results, although their Bush-era findings are consistent with the analysis of others. The second, from 2018, finds that SOTUs get more negative through a president's term; positive sentiment consistently dissipates over time (Rydeen, 2018). Most recently, Maria Kubara and Przemysław Mazurek (2021), applied STA to SOTUs, but their goal was to see if party affiliation can be determined algorithmically. To a high degree of accuracy, it can (2021). Only the 2018 STA drew meaningful results from the sentiment analysis itself, and those were quite limited in scope.

STA is still in its infancy, and large language models like ChatGPT show that there is a large demand for emotional literacy in software. We expect that below the surface of published research that there exists a flourishing market for professional sentiment analyses of customer reviews, performance evaluations, and candidate references. It is also of concern that the full extent of STAs use is largely hidden from public view. Firms can be sensitive about their use of software that has been characterized as invasive, and this sensitivity is a barrier for researchers.

Dualism

"One of the problems has to do with the speed of light and the difficulties involved in trying to exceed it. You can't. Nothing travels faster than the speed of light with the possible exception of bad news, which obeys its own special laws. The Hingefreel people of Arkintoofle Minor did try to build spaceships that were powered by bad news but they didn't work particularly well and were so extremely unwelcome whenever they arrived anywhere that there wasn't really any point in being there" (Adams, 1993).

The above quote from Douglas Adams, writer of *The Hitchhikers Guide to the Galaxy* is a modern example of the folk wisdom that inspired this paper. 450 years earlier, when speaking of the fate of a captured prince in his pre-Shakespearean *Spanish Tragedy*, English Dramatist Thomas Kyd (1959) wrote that "if he lived, the news would soon be here. /Nay, evil news fly faster still than good." An instructive point in the evolution of the sentiment is that while Adams states the impossible speed of bad news as a given, something he expects the reader to be familiar enough with to understand the joke, Kyd (1959) presents his statement as a proposition to be accepted or rejected by the speaker's interlocutor. Over time, the idea has seeped more deeply into the public conscience. Kyd (1959) was likely not the first to posit this, that news which carries negative sentiment moves faster than positive news, but he was the first to write it down. Since the 1580s the perception of bad news' Mercurian speed has persisted in

language and culture. The theory, always stated as fact, has become an inescapable piece of folk wisdom. Accordingly, researchers have sought to prove it. It must be noted that the relationship between positive and negative, what we call dualism, cannot be understood by speed alone, but the humans who propagate news must themselves be examined.

First, trying to prove the folk saying from a finance perspective Hong et al. (2000) test how analyst coverage (news) and stock momentum interact, with a gradual-information-diffusion model. They find that negative news (that which lowers stock prices) diffuses less effectively than does positive news. Notably, their study is not sentiment analysis. It is conceivable that news which carries negative sentiment could raise a stock price and thus be coded as positive within their model. Reporting on a deadly fire at a Coca-Cola plant might be explicitly "bad news," but still cause PepsiCo, Inc. to experience a bump. This is a broader issue with finance-based attempts to look at sentiment; they tend to use the results of information diffusion (stock movement), rather than any language contained within reporting. Consequently, even when asking the same question (Does bad news travel faster than good news?), it is possible to use dissimilar methods and reach dissimilar conclusions between sentiment analysis-based approaches and finance-based approaches. One insight from Hong, Lim, and Stein's paper is that "momentum strategies work better among stocks with low analyst coverage (p. 265)." This is a product of stocks with low coverage reacting to new information slower than the stocks of larger companies do. More broadly, this could imply that sentiment moves slower for less covered stories. This effect, however, is more observable with negatively coded information (Hong et al., 2000).

More recently, in 2012, Luís Miguel Serra Coelho used Hong and Stein's model and Chapter 11 bankruptcy filings in publicly traded companies to test reaction speeds to negative news. Coelho found a "statistically significant post-bankruptcy drift that lasts for at least 6 months (Coelho, 2015, p. 415)." Assuming that the negative drift represents a correction from inappropriately high valuations, then it often takes a full six months for the market to fully react to bad news. He found that the drift is worse for small, poorly covered firms. In fact, a large majority of publicly traded firms in the bottom quintile of the NYSE have zero assigned analysts (p. 430). This confirms Hong, Lim, and Stein's finding that bad news travels slowly, and slower still from smaller sources. It is also a case for the limited cognitive power of markets. Coelho (2015) contradicts both the folk wisdom that evil news travels faster still than good, and psychological considerations of dualism.

For example, Baumeister et al. (2001) bring the field of psychology down upon the nature of dualism in their exhaustive article "Bad Is Stronger Than Good." They find that in nearly every circumstance measured by psychology, negativity is "stronger" than positivity, that there exists an asymmetry between good and bad in the minds of man. In their words "when equal measures of good and bad are present,"…"the psychological effects of bad ones outweigh those of the good ones (p. 323)." Their theory rests upon three definitions which can be "understood even by creatures with limited linguistic capacity:" good, bad, and stronger (p. 324). The authors' explanation for why we are not all miserable

wrecks, despite the potency of bad, is that in sufficient quantity, good experience can outweigh bad. With sufficient consumption, one may become drunker on merlot than they might on a lesser amount of absinthe. Even within the field of psychology, negativity far outstrips positivity. By coding 17,000 psychology publications, Janusz Czapiński (1985) found that there exists 69 publications on negative phenomena for every 31 on positive.

When grappling with how persons react to emotional stimulus, a necessary concept is the hedonic treadmill theory. First put forward in 1971 by Brickman and Campbell (1971) it suggests that people return to a base level of contentment. Just as one might run on a treadmill without getting anywhere, someone might increase their income, and will not be permanently happier. Further research found that the return to the base level was slower following a negative event (paralysis) and faster for a positive event (winning the lottery). This would suggest that sentiment ought to move from positive to less positive, neutral, or negative faster than it moves in the other direction. It seems psychologists and behavioral economists disagree with market researchers. It seems that studies of individual behavior and psyche are consistently at odds with market-based attempts at studying dualism and information behavior. This could be a function of methodological differences or an instance where institutions and organizations behave differently from their progenitors. Perhaps when someone complains that she hears of funerals before weddings, she is observing reality, not some personal bias.

Methodology & Data

We borrow insights gained from options trading, in particular from calculation of the option Greeks in order to measure the sensitivity of the option price to the underlying price. The only difference is that in our approach, we don't deal with prices, but instead with sentiment values, and not with underlying prices, but with time. Concretely, we utilize the calculation of Delta and Gamma of the sentiment values of the news in order to calculate their sensitivity on time. Larger impacts of change in sentiment scores induce that more sentiment was included per time interval. Since time intervals are constant, this means that more information was included per time unit, thus the travel speed of the news per time unit was faster.

The sentiment scores are calculated following Shukla and Unger (2022), where the authors use the FLAIR NLP framework, provided by Akbik et al. (2019), to facilitate training and distribution of state-of-the-art sequence labeling, text classification and language models. For the sentiment score we chose the currently most frequently discussed country pair combinations with a high probability of engagement in an open conflict. The sentiment score for all these country pair combinations is calculated in combination with corresponding hot topic keywords. The sentiment score is calculated for the following country pair relationships: China/Taiwan, Saudi Arabia/Iran, Turkey/Greece, Germany/Ukraine, and former Yugoslavia, including Serbia, Kosovo, Macedonia, Montenegro, Bosnia and Herzegovina, and Croatia. We use following keywords in combination:

Microchip, US Aircraft carrier deployment, Nuclear, OPEC, Eastern Mediterranean, Natural Gas.

Table 1 highlights which keywords are used in which country pair combination.

Table 1. Keywords per Country Pair Combination

Country-pair Keyword		China/ Taiwan	Saudi Arabia/ Iran	Turkey/ Greece	Germany/ Ukraine	Former Yugoslavia
		✓	✓	✓	✓	✓
Microchip (+/-)		✓				
US Aircraft Carrier deployment (-)	✓	✓	✓	✓	✓	
Nuclear (-)	✓	✓	✓	✓	✓	
OPEC (+/-)	✓		✓			
Eastern Mediterranean (+)	✓			✓		
Natural Gas (+/-)	✓				✓	

We then retrieve historical news article available on Google news, covering from Dec 29, 2012- Jan 6, 2023. Most of the news articles (>90%) were retrieved within the past 3-8 months.

To test for robustness we also calculate the sentiment score for the keywords alone, which allows us to disentangle the relationship a keyword plays in combination with a country pair in a news article. In order to be able to draw conclusions about the impact of keyword sentiments on their dissipation speed we affiliate the level of violence associated with its keyword and categorize it into 2 categories: 1. Keywords associated with high level of violence, 2. Keywords with no or low level of violence. Ultimately, keywords associated with a high level of violence can be assumed to have a negative connotation and therefore provide a negative association. Conversely, keywords with a no or low level of violence can be viewed as positive associations, due to their positive connotation. Therefore, we assign a "-" sign to all keywords with a negative association and a "+/-" sign to all keywords with a positive or neutral association, indicating its positive or neutral connotation.

It is important to note that we distinguish between our subjective allocation of positive and negative associations with the keywords, and the sentiment values returned by our sentiment analyses, used for measuring the dissipation speed of news. Since the sentiment scores returned by our sentiment analyses are obtained by analyzing news articles, their values are time dependent. In contrast to that, our subjective keyword associations serve only for categorization purposes. The goal of the subjective keyword associations is to understand how the dissipation speed of news behaves in the context of negative or positive news flows. For this purpose we calculate the gamma of the sentiment scores.

We define S_t as the sentiment score of news at time t, consisting of the subsets S_t^+ for positive sentiment scores and S_t^- for negative sentiment scores, satisfying the condition $S_t \epsilon \{S_t^+, S_t^-\}$. We calculate the Gamma of the sentiment score, Γ_{S_t}, as

$$\Gamma_{S_t} = \frac{d\Delta_{S_t}}{dt}, \tag{1}$$

where

$$\Delta_{S_t} = \frac{dS_t}{dt} = \frac{S_t - S_{t-1}}{t-(t-1)}, \tag{2}$$

with Δ_{S_t} defining the change of the sentiment score over time. We then separate all positive and negative gammas into Γ^+ and Γ^- subsets, satisfying $\Gamma_{S_t} \epsilon \{\Gamma^+, \Gamma^-\}$, and conduct a t-test to test the following hypotheses:

$$H_0: \Gamma^+ \geq |\Gamma^-|, \text{resp. } \Gamma^+ \leq |\Gamma^-|, \tag{3}$$
$$H_1: \Gamma^+ < |\Gamma^-|, \text{resp. } \Gamma^+ > |\Gamma^-|. \tag{4}$$

In our first hypothesis, we test if news with a positive sentiment score exhibit at least the same or a higher Gamma than news with an absolute negative Gamma. Then, we conduct the same hypothesis vice versa, i.e. if news with an absolute negative sentiment score exhibit the same or a higher Gamma than news with a positive sentiment score. The corresponding alternative hypotheses cover the respective inverted case.

Results

We summarize in Table 2 our results from all t-test combinations. We only conduct t-tests for country pair and keyword combinations for which combinations make sense. E.g., we test China/Taiwan and Microchip, while it wouldn't make sense to test Microchip with Saudi Arabia/Iran. We display the results where news with a positive sentiment travel faster than news with a negative sentiment with a "+", while we display the results where news with a negative sentiment travels faster than news with a positive sentiment with a "-".

We can see that out of 12 combinations, there are 9 cases where positive news travels faster than negative news. Out of these 9 cases, 5 are highly significant. There are only 3 cases in which negative news travels faster than positive news, out of which only 1 exhibits a high significance. We can summarize that in 75% of our cases, positive news travels faster than negative ones, out of which 41.67% are highly significant, measured against the total sample size. On the contrary, we find only a 25% chance that negative news travels faster than positive news, out of which only 8.33% are highly significant.

Looking at the singular evaluation of the country-pair relationship sentiments as well as the keyword sentiments, we find that no country pair relationship

exhibits a significant superiority of news-sentiment travel speed, while the keywords "OPEC", "Eastern Mediterranean" and "Natural Gas" show a highly significant travel speed of positive news over negative news. Interestingly, our results return only positive news speed superiority for all keywords, while the country-pair relationships exhibit mixed signals. This might be a coincidence due to the chosen time frame for testing, and doesn't provide fundamental insights. What's more interesting for us is the fundamental relationship that is revealed by the pattern of news speed superiority of country pairs and keywords combined.

The pattern we identify is that keywords with a connection to conflict or potential conflict, such as "Aircraft Carrier deployment," exhibit a much more significant news speed dissipation of positive news sentiment scores than keywords with a more neutral or even positive association. For neutral or positive associations, we can't find a clear pattern, also due to limitations of our sample size. Nevertheless, our small sample size indicates that the opposite might hold as well. We can find a clear superiority of news speed dissipation of news with positive sentiment scores in the cases of Saudi Arabia/Iran, Turkey/Greece, and Germany/Ukraine, in combination with "Aircraft Carrier deployment". Our only extracted result for the combination "Eastern Mediterranean" and "Turkey/Greece" suggests that keywords, news, or entities associated with a positive connotation spread negative news faster than positive news. Thus, the pattern we could extract from our results is an inverse relationship of keyword association with the dissipation speed of news according to their sentiment. Nevertheless, for more neutral words such as "Microchip" and "Natural Gas", positive news seems to spread faster than negative news.

Table 2. Results

Country-pair Keyword		China/ Taiwan	Saudi Arabia/ Iran	Turkey/ Greece	Germany/ Ukraine	Former Yugoslavia
		+	-	-	+	+
Microchip (+/-)	+	+***				
US Aircraft Carrier deployment (-)	+	+	+***	+***	+***	
Nuclear (-)	+	+	-	+	+	
OPEC (+/-)	+***		-			
Eastern Mediterranean (+)	+***			-***		
Natural Gas (+/-)	+***				+***	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.10 ' ' 1.

Conclusion

Our research in this paper focuses on the dissipation speed of good news and bad news. It is broadly held that bad news spreads faster than good news. This

popular assumption (folk wisdom) has been repeated or contested within diverse fields, including journalism, psychology, and finance. Prospect theory is one important tool for understanding reactions to sentiment. It alleges that negative outcomes have more impact on the human psyche than positive outcomes. Kahneman and Tversky (1972) showed that people evaluate situations in terms of expected utility relative to a reference point rather than absolute outcomes. When it comes to the relative evaluation of the impact of positive or negative news on the dissipation speed of the news, the relativity of biased information sets holds as well. However, the power of negativity seems to be overruled by the impact of positive sentiment scoring. This contradicts both the popular assumption of

The insights gained from our small but powerful sample size suggest an inverse relationship between negative keyword association and the dissipation speed of good news, and vice versa. We find a superiority of dissipation speed associated with good news over bad news on keywords or relations that are connoted to geopolitical conflict scenarios and a superiority of bad news traveling faster in association with positive connotation. The implications of these findings are very interesting as they raise further questions about both what makes positive news travel faster and at how granular a level might we understand dissipation speeds.

As we find, dissipation speed all depends on the context and the reference point. If the reference point has a negative or conflict association, then positive-related news will spread faster than negative-related news. However, if the reference point has a neutral or positive association, then the speed of dissipation of negative news can also be superior over the dissipation speed of positive news. However, the picture for the latter is not as straightforward or significant as it is for the former. Further research would need to focus on larger sample sizes to include more cases of neutral or positively associated keywords or relations and then measure the dissipation speed of good news and bad news for these cases in order to get a clearer picture.

Acknowledgments

References

Adams, D. (1993). *Mostly harmless*. Random House.

Ahlgren, O. (2016). Research on sentiment analysis: the first decade. In *2016 IEEE 16th International Conference on Data Mining Worksho*ps, 890–897.

Akbik, A., Bergmann, T., Blythe, D., Rasul, K., Schweter, S., Vollgraf, R. (2019). FLAIR: an easy-to-use framework for state-of-the-art NLP. In *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics* (Demonstrations), 54–59.

Baumeister, R., Bratslavsky, E., Kinkenauer, C., Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*(4), 323–370.

Brickman, P., Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (ed.), *Adaptation-Level Theory*, 287–305. New York: Academic Press.

Bush, G. W. (2001). *Address to a joint session of congress and the American people*. Washington, D.C.: United States Capitol.

Coelho, L. M. S. (2015). Bad news does not always travel fast: evidence from Chapter 11 bankruptcy filings. *Account Finance*, *55*, 415–442.

Czapiński, J. (1985). Negativity bias in psychology: an analysis of Polish publications. *Polish Psychological Bulletin*, *16*(1), 27–44.

Giachanou, A., Crestani, F. (2016). Like it or not: a survey of Twitter sentiment analysis methods. *ACM Computing Surveys*, *49*(2), 1–41.

Hong H, Lim T, Stein JC (2000) Bad news travels slowly: size, analyst coverage, and the profitability of momentum strategies. *The Journal of Finance, 55*(1), 265–95.

Kahneman D, Tversky A (1972) Prospect theory: an analysis of decision under risk, *Econometrica*, *47*(2), 263–292.

Kubara, M., Mazurek, P. (2021). *State of the Union*. RPubs.

Kyd, T. (1959). *The Spanish play*. In R. B. Heilman (ed.), *An Anthology of English Drama Before Shakespeare*. Story, Holt, Rinehart and Winston, 253.

M&S Consulting (2015). *Presidential State of the Union sentiment analysis*. M&S Consulting-Cloud, DevSecOps, Integration|Independent Enterprise Cloud Consultants.

Micu, A., Micu, A. E., Geru, M., Lixandroiu, R. C. (2017). Analyzing user sentiment in social media: implications for online marketing strategy. *Psychology & Marketing*, *34*(12), 1094–1100.

Naveed, N., Gottron, T., Kunegis, J., Alhadi, A. C. (2011). Bad news travel fast. In *Proceedings of the 3rd International Web Science Conference*, 1–7.

Rambocas, M., Pacheco, B.G. (2018). Online sentiment analysis in marketing research: a review. *Journal of Research in Interactive Marketing*, *12*(2), 146–163.

Rydeen, C. (2018). *Sentiment of the Union: analyzing tone in Presidential State of the Union addresses*. Honors Theses, 186. Available at: https://egrove.olemiss.edu/hon_thesis/186.

Shukla, D., Unger, S. (2022). Sentiment analysis of international relations with artificial intelligence. *Athens Journal of Sciences, 9*(2), 91–106.

Deliberating Issues or Discharging Feelings?
A Closer Look at "Below-the-Line" Reader Comments on the Diaoyu/Senkaku Islands Dispute

By Jin Yang[*]

The study addresses a concern over the quality of online news reader comments. Specifically, it examines how online reader comments contribute to deliberation from cognitive and interactive perspectives. The results of content analyzing, both qualitatively and quantitatively, the comments from an online publication The Diplomat suggest that comments were mostly deliberative and serious, and they were more neutrally oriented than degrading in terms of feelings. There was some association between reasonings and feelings but not very strong. The study concludes that comment fields can be a good platform for participatory journalism and enrich deliberation on issues.

Keywords: comment fields, reader comments, the Diaoyu/Senkaku Islands dispute, User Generated Content (UGC), analytic process, social process, public deliberation

Introduction

News consumption such as newspaper reading and TV news watching has been found to have a positive effect on political knowledge (David, 2007) and civic participation (Norris, 2000). Besides, news consumption may frame how audiences perceive what they read (Lecheler et al., 2015). However, news consumption, in general, is a passive process during which its audiences don't have any means to interact with news, even though media organizations' interest in audience participation dates back to when the media were founded (Williams et al., 2011).

News media across western democracies have been historically adopting some participatory forms of journalism to encourage citizen participation. The early practice of publishing readers' letters to editors in newspapers (Nord, 2001), the radio phone-ins (Loviglio, 2002) and television talk shows (Livingstone & Lunt, 1994) were ways of involving citizens in the news-making. The early 1990s rise of public journalism motivated newspapers to experiment with ideas of seeking participation from community members in shaping the news agenda (Nip, 2008; Shepard, 1994). Such experiments of engaging citizens were encouraging but very limiting because traditional media are by nature weak for citizen participation.

The development of online journalism brings in newly minted forms of participatory journalism such as newsgroups, blogs, Wikipedia, forums etc.

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[*]Professor, University of Memphis, USA.

Among others, one form, "below the line" comment fields, i.e., reader comments, attached to the end of news stories or news articles, is especially interesting and promising.

Graham and Wright (2015) noted that the rising practice of reader comments, as one type of user generated content (UGC), is changing the journalism field significantly. Reich (2011) pointed out the practice may make a positive impact in journalism due to its capacity of adding perspectives and contributing to public discourse, but the poor quality of comments can only tarnish a journalism organization' reputation. As a matter of fact, several news organizations such as The Verge, Popular Science, Recode, USA Today's FTW, The Week, Mic and Reuters phased out reader comments fields in 2014 due to the newsroom struggle with the moderation burden especially in managing the issues related to anonymous readers (Ellis, 2015). NPR closed the comment fields in 2016 (Kovacs, 2020). However, the New York Times expanded its comment fields in 2017 by utilizing artificial intelligence technology to manage inflammatory or inappropriate comments, and the South Carolina newspaper, The State, also implemented AI to detect and remove toxic comments (Kovacs, 2020). These various approaches in practice warrant another closer look at the issue seriously.

The mixed views on comment fields by professionals and the industry are also reflected in research findings by scholars and researchers. Ruiz et al. (2011) analyzed five different online newspapers of the New York Times (USA), The Guardian (U.K.), Le Monde (France), El Pais (Spain) and La Repubblica (Italy). They concluded that comments on the publications of the Liberal model (i.e., as represented by the New York Times and the Guardian) consolidated the democratic process but the comments on the publications of the "Polarized Pluralist" model (the remaining three) tended to foster more polarization.

Hence, the in-depth research on audience participation on online publication platforms needs more solid findings. Second, theories on the user generated content are still in the early development stage, and those that are applicable to news content need to be updated. Most important of all, research on reader comment fields will not only address the quality concern over user generated content but also facilitate the understanding of the contributions of reader comment fields to the public deliberation. Deliberation as a theoretical concept has been explored in multiple disciplines of political science, and communication including journalism. But in the context of comment fields, it may have some added value because online deliberation processes may dictate the future of a staple of news consumption.

This *below-the-line* comment research paper chooses the online publication of *The Diplomat* to conduct the empirical inquiry on readers' comments on the Diaoyu/Senkaku Islands dispute[1] for two reasons. This online news magazine has firmly established itself as a leading voice on Asian affairs with solid content from

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[1]Although disputes over the Diaoyu/Senkaku Islands or Diaoyu Islands or Diaoyutai Islands have been recurring for many decades, it is in April 2012 that the conflict involving Japan, China, Taiwan reached its climax because Tokyo Governor Shintaro Ishihara proposed to purchase these islands by the Tokyo Metropolitan Government. The proposal yielded a series of political and even physical clashes among the three sides.

respected writers and experts, and it has no clear affiliation with any country. Second, the Diaoyu/Senkaku Islands dispute stirred up heated debates and arguments due to its historical sovereignty controversy among readers of many ethnic backgrounds. The platform and the event provided an optimal opportunity to study the deliberation process from the participation perspective.

Literature Review

Deliberation as the Theoretical Framework

Deliberation is one of the core principles of democracy. Researchers have been asking whether the Internet, as a public sphere, offers an ideal platform for free, equal, and open deliberation among citizens (Graham, 2008). Based on Schneider (1997), Jensen (2003) and Dahlberg (2004), Graham (2008) identified six normative conditions of the process of deliberation: the process of achieving understanding; structural equality; discursive equality; structural autonomy; discursive freedom; and sincerity. Among them, *achieving understanding* is the most important and relevant normative condition for this study.

Graham (2008) noted that **the process of achieving understanding** is composed of four aspects: rational-critical discussion, reciprocity, reflectivity, and empathy. *Rational-critical discussion*, as the basic foundation for understanding, drives all the deliberative talks where participants voice their views and opinions with relevant evidence and solid points. The aspect of *reciprocity* emphasizes that participants first listen and then respond to others' claims and opinions, but *reflectivity* is about participants processing claims or arguments internally. Lastly, participants go through *empathy* to put themselves into others' shoes to fully understand what is under discussion. These four aspects form a full cycle of understanding in deliberation.

While Graham's conceptualization of deliberation encompasses a comprehensive undertaking of the interplay among individuals, society, and systems, other researchers focus on the process itself. Manosevitch and Walker (2009) defined deliberation in an ideal situation as composed of two processes occurring simultaneously: analytic process and social process. While the analytic process of deliberation refers to the substance of the issue being discussed and involves the creation of an information base incorporating variables of narratives, facts, sources, values, positions, and reasons plus testimonies of personal experience (Manosevitch & Walker, 2009), the social process of deliberation involves addressing other comments and commenters, posing questions, addressing the article content (Manosevitch & Walker, 2009). If the analytic process is more about the cognitive dimension of the discussion that targets the intellectual part of issues, the social process is more about the interaction among participants that values and respects other parties by conforming to social etiquettes. This two-dimension deliberation model was tested on two U.S. regional newspapers' reader comments (Manosevitch & Walker, 2009), and was found to be sound and solid in identifying the dynamic process the readers engaged in.

Graham's (2008) and Manosevitch and Walker's (2009) conceptualizations overlap significantly. Graham's (2008)'s rational-critical aspect and reflectivity are similar to Manosevitch and Walker's (2009) analytic process as they involve reasoning, reflections or the cognitive dimension of deliberation. And the aspects of reciprocity and empathy by Graham (2008) give prominence to interactions and mutual engagements among participants, which is what Manosevitch and Walker (2009) defined as the social process, the interactive dimension of deliberation.

"Below the Line" Comments or Reader Comments as UGC

Though online discussion forums, popular in the 1980s and 1990s, gradually faded, its core principle of **sharing** based on user generated content (UGC) survived and expanded (Hopp & Santana, 2012). While some online companies relied on UGC exclusively such as Facebook, twitter and Youtube, other online news media incorporated UGC to engage loyal readers (Hopp & Santana, 2012). Reader comment fields are debate spaces opened up below news articles and blogs that allow audiences to discuss news content with each other and with journalists (Graham & Wright, 2015). Unlike news stories, which live on newspaper websites for months, years, and even indefinitely in online archives, reader comments are usually an ephemeral part of a newspaper's content; they can appear and disappear while the original story remains on a newspaper's site (Santana, 2014). This practice makes the research on reader comments challenging. The moderation of comments varies by newspapers, and comments often post immediately with auto filters generally disallowing vulgar language (Santana, 2014). Seen as blurring the boundary between formal content and UGC, comment fields provide opportunities for journalists to rethink their stories by reflecting on their writing, testing their points, receiving feedback, sometimes getting new leads (Graham & Wright, 2015). From the business perspective, comment fields may generate revenue by maintaining an engaged community and increase visibility in search engines by keeping the website "hot" (Graham & Wright, 2015).

The benefits of having comment fields on news websites are multiple. Some researchers suggest journalists' relationship with comment fields begin to change (Robinson, 2010; Loke, 2012). Integration of user generated content within professional journalism space creates a new platform for citizens to get engaged with news, affect public agenda, and contribute to public discourse and opinions (Tumber, 2001; UGC, 2012). Graham and Wright (2015) found that comment fields contribute to deliberation because the discussions are typically rational, critical, coherent, reciprocal, and civil. Gao and Koo (2014) pointed out online users have more freedom to express themselves and discuss issues raised by the media. Liu and Fahmy (2011) found that due to the anonymous nature of posted comments, the online setting may reduce the effect of the spiral of silence which is helpful in decreasing users' fear of social isolation.

However, UGC has created a range of tensions and problems that need journalists to rethink traditional values of quality, impartiality, and balance with audience participation (Harrison, 2010). Ellis (2015) noted the closure of comment fields by well-known news organizations was attributed to moderation difficulties

and legal challenges resulted from anonymity. Finley (2015) concurred that the pains and difficulties of moderating reader comments are not worthy of the time and efforts invested. Gillmor (2004) observed that news organizations are slow in adopting new things but quick to give up. Most mainstream media generally hold the view that they are the professionals who know the ins and outs of how to practice the business of news gathering (Thurman, 2007). However, the public participation in the process of news development can add extra value to traditional professional journalism.

Public Participation in News

Bowman and Willis (2003) defined participatory journalism as "the act of a citizen, or group of citizens, playing an active role in the process of collecting, reporting, analyzing and disseminating news and information" (p. 9). Engesser (as cited in Frohlich et al., 2012) highlighted the importance of active audience participation in content production on the public media platform. Two common points emerged here: one is the development of conversations by non-professional citizens and the other is the creation of a dynamic and egalitarian platform (Bowman & Willis, 2003). Conversations produced in such a form are available for all community members to see, and the corresponding debates are open for public scrutiny, which is significantly different from traditional news media that are set up to filter information before public can see it. If traditional news media were more like a closed system, the practice of below-the-line comment fields makes it more open.

However, to what extent do readers make significant contributions to debate and to deliberation intellectually and interactively? Do those comments left by readers deserve serious readings or simply register as some light entertainment for spectators? In essence, the question on *whether reader comments are deliberative* deserves asking.

Using the analytical and social process for deliberation (Manosevitch & Walker, 2009) together with the four aspects of achieving understanding (Graham, 2008) as the theoretical foundation, this study sets about to investigate how online news readers responded to the articles on the Diaoyu/Senkaku Islands dispute published in *The Diplomat* online news website. The mixed research method of content analysis, both quantitative and qualitative, is used to address three research questions.

RQ1. To what extent do reader comments contribute to deliberation on the Diaoyu/ Senkaku Islands dispute from the analytic process perspective?
RQ2. To what extent do reader comments contribute to deliberation on the Diaoyu/ Senkaku Islands dispute using the social process perspective?
RQ3. What is the relationship between the analytic process and the social process in the Diaoyu/Senkaku Islands dispute deliberation?

Method

Population

The international online news magazine *The Diplomat,* headquartered in Washington, D.C, provides analysis and commentary on events occurring in the Indo-Pacific region (Wikimedia Foundation, 2021)[2]. According to Media Bias/ Fact Check website (Zandt, 2010), *The Diplomat*, owned by Trans-Asia Inc. an international translation service, covers politics, society, and culture in the Asia-Pacific region. Overall, *The Diplomat* was rated the least biased with its straight forward news reporting and minimal left-right bias (Zandt, 2020). While most of the "below-the-line" research findings were based on samples from well-established traditional news organizations, this study attempts to broaden the sample spectrum by covering a non-traditional but dedicated current affairs-oriented online publication. Readers of various backgrounds are more likely to visit *The Diplomat* as it has no clear affiliation with a particular country, which is important because it would generate a diverse discourse for analysis.

Sample

Online news readers comments were sampled from articles on the Diaoyu/ Senkaku Islands dispute from April 2012 to December 2013. April 2012 is when Tokyo Governor Shintaro Ishihara proposed to purchase the islands from the private owner and Dec. 2013 is when Japan decided to increase its defense budget amid tensions with China. However, when the online publication *The Diplomat* was contacted for access to the comments posted on the related articles, the publisher of *The Diplomat*, J. Pach (personal communication, May 21, 2016) replied, "…we no longer have reader comments on the site -- precisely because like many other sites we found that readers' comments made no useful contribution to the public debate. The comments for that particular article are no longer accessible." Therefore, the Wayback Machine, a digital archive of World Wide Web and other information on the Internet by a non-profit organization named the Internet Archive[3] was consulted to access reader comments. The service enables users to see archived versions of web pages across time via a "three dimensional index" (Wayback Machine, n.d.). The problem with relying on the Wayback Machine to access reader comments is that researchers had to enter accurate dates to retrieve those reader comments. But there was no way to predict how long *The Diplomat* had kept an article open for readers to post comments, the dates entered were mostly, at best, an educated guess. The following is on how 103 comments

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[2]It was originally an Australian bi-monthly print magazine, founded by Minh Bui Jones, David Llewellyn-Smith and Sung Lee in 2001, but due to financial reasons it was converted into an online magazine in 2009 and moved to Japan and later Washington, D.C. The magazine is currently owned by Trans-Asia Inc. (Wikimedia Foundation, 2021).

[3]The Internet Archive is a 501(c)(3) non-profit that was founded to build an Internet library. Its purposes include offering permanent access for researchers, historians, scholars, people with disabilities, and the general public to historical collections that exist in digital format (About the Internet Archive, n.d.).

were secured from the Wayback Machine. First, a list of Diaoyu/Senkaku Islands dispute articles was compiled within the specified 20-month-long (from April 2012 to Dec. 2013) time frame from *The Diplomat* online publication. Second, the articles without reader comments were eliminated, and those articles with reader comments were kept and their dates were recorded and compiled as a new list. Third, based on this list, the Wayback Machine was used to retrieve pages associated with those dates. And in order to maximize the number of reader comments, the researcher also purposefully entered a date that was several days later than the publication date of the article assuming that the article was still kept alive and open several days later. This technique found that some articles were kept open for four days, some for two days. Fourth, once the Wayback Machine provided the URLs to the articles on *The Diplomat*'s home page, they were clicked and saved as pdf files and printed for analysis. Overall, 103 comments were obtained by using this technique.

Measures

Graham (2008) and Manosevitch and Walker (2009) provided theoretical guidance in designing the study's measurements. Specifically, ***deliberation***, conceptualized from analytic process consisting of rational-critical and reflectivity aspects and social process consisting of reciprocity and empathy aspects, guided the development of six variables: theme relevance, reasoning, facts, sources, interactions, and emotional discharge.

The study adopted a ***qualitative*** content analysis approach to these six variables first. Specifically, an in-depth reading of all the comments was initiated to identify categories and codes. The **theme relevance** variable started with deciding the themes of news articles first. Defined as a central message, a theme is mostly implied in the article, and researchers had to dig out the theme through multiple rounds of reading. Once the articles' themes were identified and laid out, all the comments were read and compared to the corresponding articles' themes. If the comments were in line with the themes, they were assigned yes. If the comments were not in line with the themes, they were assigned no.

Reasoning, defined as the process of thinking in a logical way in order to form a conclusion or judgment, facilitates making sense of things, establishing facts and justifying practices. The qualitative reading of the comments focused on how the conclusion was drawn by examining the process of thinking. Basically, the point made in the comment was compared to the main point made in the article. Therefore, the articles' main points had to be identified first and served as the baseline for comparison. The main point refers to what the article is all about or the main idea. It works similarly as identifying the subject in a passage. Second, every comment posted after each news article was read and coded based on whether it 1) challenged or criticized the main point in the article; 2) supported or concurred or agreed to the main point in the article; 3) provided an alternative view to the article; or 4) offered no reasoning at all.

Facts is to examine whether the commenter includes factual information or not. This round of reading of comments included identifying hard facts such as

statistics, years, specific laws or regulations or treaties, and generating a list of hard facts. Then comments were read one after another to see whether it had those facts. Lastly, yes and no values were assigned.

Sources are operationalized as whether or not the comment per se included the references (direct quotes or indirect quotes) by experts, scholars, websites, or historical documents. Again, the list of sources was generated by a close reading of all the comments. Then each comment was read and coded with yes for having one of those sources or no for without any sources.

Interaction is about what or to whom the comment was written to respond. Each comment was carefully read to find out what or who was the intended addressee. The careful reading of the comments generated a list of target addressees: news article per se, the author, and other commenters. Based on this list, each comment was coded accordingly with three categories.

Emotional discharge is defined as whether or not the comment revealed strong feelings such as anger, irrationality, frustrations as the sovereignty over territory topic usually leads to such strong feelings. Comments were read from the feeling perspective and evaluated. Those which aimed to lower others in character, quality, esteem or rank via ad hominem attacks were summarized as degrading, while those comments which included no such feelings were summarized as neutral. The reading didn't reveal any positive or encouraging or praising feelings, which seems unusual. Therefore, the code for emotional discharge was set at the binary level: degrading or neutral.

In sum, the process of analysis followed four steps. First, all the news stories were read for theme and main points identification, this qualitative process deals with news articles. Second, comments were read and compared to the themes and main points lists and codes were assigned based on comparison. Third, comments were analyzed qualitatively for facts, sources, interaction and emotional discharge respectively, and a list of corresponding categories were identified. Lastly, based on the list, codes were assigned for every comment and recorded in an Excel spread sheet. A graduate student was trained for the quantitative part of the content analysis.

Intercoder Reliability

To increase confidence in the quantitative findings, an intercoder reliability test between the graduate student and the researcher was conducted on 10% of the sample.[4] Three rounds of coding were administered until intercoder reliabilities on all the five nominal-level variables (theme relevance, reasoning, facts, interaction, and emotional discharge) reached Scott's pi coefficients of .8. The first round used 30 comments, and the second round used 15 comments, and the third round 15 comments.

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[4]To ensure the real sample's 103 comments to be kept in the sample for analysis, the researcher used other similar reader comments for the coding training. The similar reader comments were obtained from an English-speaking news site the New York Times.

Results

The study analyzed 103 comments, and the average number of words per comment is 88 with the minimum of 4 words and the maximum of 636 words. While 72% of the comments are independent posts, 28% are replies to posts. There are two peaks of reader comments in the time frame: Nov. 23, 2013 (with 44 comments) when the article was about the establishment of ADIZ[5] on the *East China Seas* and Nov. 26, 2013 (with 42 comments) with the published article *Getting Senkaku History Right*.

RQ1. To what extent do reader comments contribute to deliberation on the Diaoyu/ Senkaku Islands dispute using the analytic process?

The answer to this RQ1 is based on the assessment of four variables: theme relevance, reasoning, facts and sources.

For the ***theme relevance***, the list of four themes was generated from the initial reading of the news articles: 1) The diplomatic relationship between Japan and China gets more tense as the anniversary of Senkaku/Diaoyu islands approaches; 2) Chinese claims to the Senkaku/Diaoyu islands didn't hold up well; 3) The U.S. is in a delicate and vague position on the sovereignty of the islands; 4) The tension over the Senkaku/Diaoyu islands escalates due to China's establishment of the East China Sea Air Defense Identification Zone. Then each comment was read and compared to the four themes to decide whether it was in line with the theme or not. The study found most commenters made an effort to read the article and made very specific comments to be relevant. For instance, responding to a November 26, 2013 news article *Getting Senkaku History Right*, a comment by a commenter named ***JDenverPeace*** reads: "This article contains just too many errors and willful omissions, which is more an opined piece of propaganda than a balanced review of all the facts…." And with a *New York Times* article link, ***JDenverPeach*** continued to point out that the *New York Times* article was more "professional to ask for reviews and comment from Japanese sources." But the study did find some comments which were not related to the article theme. An example of such, as a reply to another commenter who used "LOL" to challenge the article author's credibility, reads like this: "Right, because people can't think objectively on issues outside of their nationality. Save your 'LOLS' for Facebook and allow adults to talk." A rely to the above comment seems to be even more irrelevant, "Where are your parents then, Bmc? What handles are they using?"

Overall, the study found that the majority, i.e., 87%, of the comments, were related to the theme of the article while 13% was not related. The chi-square goodness of fit test (χ^2 (1)= 57.6, $p < .001$) was significant.

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[5]An ADIZ is a publicly defined area extending beyond national territory in which unidentified aircraft are liable to be interrogated and, if necessary, intercepted for identification before they cross into sovereign airspace. The concept is a product of the Cold War when the United States declared the world's first ADIZs to reduce the risk of a surprise attack from the Soviet Union (Welch, 2013).

For ***reasoning*** variable analysis, a close and thorough reading of news articles identified four main points: 1) China and Japan both take actions to escalate the tension; 2) China's claims to the islands are not legitimate; 3) Japan started the crisis but China made the crisis worse and the U.S. attempted to balance between them; 4) China's ADIZ strengthened its sovereignty claim and attempted to change the status quo. Then each comment was read and compared to the main points of the news articles, and assigned values from 1 to 4 representing criticizing, alternative, supporting, and no reasoning categories. A comment of criticizing nature is exemplified in this comment by ***Keys*** dated Nov. 28, 2013, at 16:10: "Good post. No well-educated or informed readers will take the Japanese excuse seriously. Japan has a long, infamous record of revisionist practices in its school textbook editing. The US also has an similar, more nuanced approach in dissemination of biased, colored, incomplete, and false information / news through its mainstream media, especially when it comes to China and Russia." ***Keys*** not only strongly criticized Japan's act of not admitting what it did to China in WWII but also criticized the U.S. media in failing to report events more comprehensively. The "criticizing nature" comments formed the majority of the comments: 42.7%. The following is an example of "no reason" nature: "The world under the leadership of US is A DOUBLE STANDARD WORLD" by ***FJ0903*** on Nov. 24, 2013 in response to the article titled *China Imposes Restriction on Air Space Over Senkaku Islands*. Such a comment simply put down an opinion without explaining the rationale at all and this kind of no reason comments took a quarter of all comments. A supportive comment can be found in this line by ***Zed*** on Nov. 27, 2003: "…Some of you criticize the writer of this article for being Japanese, thus making this pro-Japanese-claim article automatically illegitimate. Does that mean that a Christian book about the pros of Christianity or a Muslim book about the importance of Islamic tradition is automatically 'baseless'? That logic makes no sense…" ***Zed***'s comment lent a strong support to the news article author's stand on issues and such similar supporting comments constituted 11.7% of the comments. Lastly, an alternative comment is exemplified by ***Yi Ding***'s comment on November 28, 2013: "The article by Prof. Tadashi Ikeda is interesting and lays out the Japanese case for the islands very clearly. Of course, as part of laying out the Japanese case he also basically disregards or minimizes any evidence for the Chinese case for the islands. I think this kind of exposition is a good thing, and it's important for people from both sides the argument to express their views clearly and in the media so that viewers can review the evidence and make their own decisions." Such a comment attempts to tell that while it is good to hear the Japanese side of story, it is also very important to tell the Chinese side so that the readers make an informed decision on their own, which formed an alternative view to the main argument made in the story: Japan had the legitimate sovereignty claim to the islands. These alternative reasoning comments took 20.4% of all the comments.

The chi-square goodness of fit test on the four categories of criticizing, alternative, supportive, and no-reasoning produced a significant result (χ^2 (3)= 21.2, $p < 0.001$). See Table 1 for details. Basically, 42.7% of the comments were

of a criticizing nature, around 25% contained no reasoning at all, followed by 20.4% of alternative comments and lastly, it was 11.7% for supporting reasoning.

Table 1. Results of Chi-square Goodness of Fit Test and Descriptive Statistics for Reasoning

Reasoning			*Chi-square goodness of fit*
	criticizing	42.7	$\chi^2 (3) = 21.2, p < .001$
	alternative	20.4	
	supporting	11.7	
	no-reasoning	25.2	
	Total	**100**	

Note. n =103

The **facts** list, obtained by a thorough reading of all the comments, was summarized as having statistics, years (including decades, centuries), laws, regulations, treaties, URL references, specific document titles and related references. Then each comment was examined by comparing it to this list, and assigned yes or no values. An example illustrating fact use was found by a commentator named ***Igor*** on Nov. 28 at 19:17 "…At least, to refresh your memory, Zhou Enlai has protested against US control of Ryukyu (Okinawa including Senkaku/Diaoyu) in the 50s, after WWII, and repeated that Ryukyu islands, including Senkaku islands, were an 'indivisible' part of Japan and have 'never been separated' from Japan. Please refer to Zhou Enlai speech of 1951 about San Francisco Treaty. His stance was reiterated in (the very official) People Daily (8.01.1953, again in 26.03.1958)." And a non-fact comment read like this: "Zero trust in Chinese historical revisionists, often sponsored and directed by the Chinese government. All freedom loving people in Asia and their US ally must join together to oppose Chinese imperialism and naked aggression." Such comments provided no facts, or no statistics, no numbers, no URL references, and no documents to back up the claim in the comment. And the comments providing facts or new information took a predominate majority: 70.9%, and 29.1% offered no new information but simply a repetition of information, and the chi-square goodness of fit test found the two categories to be very significantly different ($\chi^2 (1) = 17.95, p < 0.001$).

Again, the list of **sources** was generated by a close reading of all the comments and it included the references by experts, references by scholars, website URLs and historical documents naming, and no references at all. Then each comment was read and coded with yes for having sources or no for without any sources. Comments with sources usually provide a link or at least a document name for readers to refer to. This is an example using links as sources by ***Yi Ding*** on Nov. 28: "If people are interested in the Chinese viewpoint on these islands, this article lays it out quite comprehensively as well: http://www.china.org.cn/ opinion/2012- 09/14/content_26520374.htm." And this is another example of using a document name as a source by **Michael Turton** on Nov. 27 "… Search for my piece 'Constructing Chinese claims to the Senkakus' here at the Diplomat. The Japanese author here is quite correct in his view that the Chinese claim is of recent

vintage." However, no-source examples constituted the bulk of the comments with no links and no document names. Take a look at this example by ***Brian*** on Nov. 27 to illustrate a typical no-source comment: "'If you look at a map, these islands are closer to China than Japan. Obviously they are Chinese territory.' By this same logic, all Japan needs to do is claim Guam since its closer to them than it is to the United States. This line of reasoning is comical." And no-source comments took an overwhelming 89.3% of all the comments probably because the comment fields posts didn't look like having much space to cite sources. Overall, the **sources** variable was found to be significantly different (χ^2 (1) = 63.70, p < 0.001) meaning that "not using sources" category (89.3%) was much more than "using sources" category (10.7%).

RQ2. To what extent do reader comments contribute to deliberation on the Diaoyu/ Senkaku Islands dispute using the social process?

Interaction was identified after qualitative reading of all comments to have three levels: interaction with content, with fellow commenters, and with journalists. Commenters tended to more likely respond to the main point made in the news articles or address issues or concerns raised in the news articles. For instance, a commenter named ***Kanes*** responded to the article *Getting Senkaku History Right* by making this comment: "So the islands emerged from the sea only in 1895? If that was so Japanese claims are true. But these islands were in use by the Chinese since times ancient." This kind of interaction with the content of the news articles taking 56.3% of the comment space demonstrated the commenter's seriousness in reading and digesting the content and efforts in deliberating the point. The second type of interaction with the author can be an overall evaluation of the article from the writing style perspective (e.g., "The article contains just too many errors and willful omissions….") or an effort to responding to a particular line from the article (e.g., " 'Now China is trying to create new facts in the air.'…. So in other words, they're being proactive in their territorial claims and responding to escalations by opposing sides? Wow, so insidious, how dare they."). Such interaction was very rare and took only 3.9% of the comment space. The third type of interaction with commenters was the second most common taking about 39.8%. A typical example was to use the reply function on the site to generate or maintain a thread of comments. There were other commenters who didn't use the reply function but instead used the twitter style of responding by using the @ followed by a commenter's name or simply type "to" followed by a commenter name as an indication that the comment was meant to address the commenter. In sum, the study found a significant result among the three categories of interactions (χ^2 (2)= 44.4, p < .001) and the interactions with content (56.3%) were significantly much more than the interaction with fellow commenters (39.8%), and the interaction with the author or the journalist (3.9%) who wrote the story was the lowest. See Table 2 for details.

Table 2. Results of Chi-square Test and Descriptive Statistics for Interactions

Interaction			*Chi-square goodness of fit test*
	with content	56.3	$\chi^2(2) = 44.4, p < .001$
	with fellow commenters	39.8	
	with journalists	3.9	
	Total	**100**	

Note. n=103

The **emotional discharge** types included lowering others in character, quality, esteem and rank that were obtained from reading the comments one after another. Degrading comments were not only strong but also very negative, and neutral comments were more objective and detached. For instance, on November 24, 2013, a commenter named ***Observer*** responded to the article of *China Imposes Air Space Over Senkaku Islands* by claiming that China and Chinese people were "pathetic": "Keep on dreaming comrade. Oh, while you are at it, keep yelling 'historic evidences' out loud over and over to make you feel better from all the shame and humiliation...LOL. So sad and pathetic. Great day to be a chinese, eh?" Another case of using degrading comments was from ***YiJiun*** who posted three consecutive degrading comments on the same day. The first one read: "Weak Zone and self-crippling...So, this is only what Xi could do?" Then YiJiun posted second comment that included "…you just slapped yourself in the face!" The third one read: "But, I think Xi might still be correct on this...because China doesn't want to be buried with the lunatic to its East...Not worthy, just locked him up first :)." Fortunately, these degrading comments were only a smaller portion of the comments (27.2%). Most comments (72.8%) stayed neutral and objective and focused on issues and topics. Examples such as this kind of comment abound: "This is going to escalate and is akin to flicking a lighter while pumping gasoline. The inevitable challenge by either Japan or Taiwan will be the snap that sends financial markets tumbling. The middle east also heating up, these rifts have the same look as the world prior to WWI, and the potential to be far worse." Quantitatively, a significant result ($\chi^2(1) = 21.5, p < 0.001$) was found. The neutral feelings (72.8%) were significantly much more dominant than the degrading emotion (27.2%). See Table 3 for details.

Table 3. Results of Chi-square Test and Descriptive Statistics for Emotional Discharge

Emotional discharge			*Chi-square goodness of fit test*
	degrading	27.2	$\chi^2 = 21.5$, df = 1, p < .001
	neutral	72.8	
	Total	**100**	

Note. n=103

RQ3. What is the relationship between the analytic process and the social process in the Diaoyu/Senkaku Islands dispute deliberation?

Multiple chi-square tests of independence were run between the analytic process' variables and the social process' variables. Most of the tests turned out *not to be significant*. **The only significant result** was found between **the reasoning variable** and **the emotion discharge variable** (χ^2 (3)= 9.7, $p < 0.05$). To be specific, comments with alternative arguments were more likely to be neutral (95.2%) than being degrading (4.8%). The alternative-argument comments may be made via thinking outside of the box and providing a constructive suggestion to the point made in the article. The commenter's focus would have to be on reasoning rather than on feelings. That might explain why such comments tended to be neutral rather than degrading. Here is an example of a comment by a commenter named **ACT** on Nov. 24, 2013 in response to the article *China Imposes Restriction on Air Space over Senkaku Islands*. "This has also been posted as a significant story on the Guardian; as far as i'm concerned, this is about as significant of an incident as the incident where a PLAN destroyer locked its radar onto a Japanese ship. In other words, this move –while understandable on the part of the PRC – just increased the risk of conflict tenfold, and all but ensures that the PRC will be firing the first shots of any conflict." While the news article emphasized the point that China strengthened its sovereignty claim over the islands via the ADIZ establishment, the commenter pointed out China brought the crisis to the breaking point and predicted China would fire the first shot. This alternative view, however, was presented in a calm and objective manner without resorting to any strong emotional word.

Criticizing reasoning, supportive reasoning, and no reasoning did not produce any significant relationships with either degrading or neutral feelings. See Table 4 for details.

Table 4. Results of Chi-square Test and Descriptive Statistics for Reasoning by Emotion

	Reasoning			
Emotion	criticizing	alternative *	supportive	no-reasoning
degrading	11 (25.0%)	1 (4.8%)	5 (41.7%)	11 (42.3%)
neutral	33 (75.0%)	20 (95.2%)	7 (58.3%)	15 (57.7%)

Note. χ^2 (3)= 9.72. Numbers in parentheses indicate column percentages. *$p < .05$.

Conclusion and Discussion

Against the backdrop of the User Generated Content, this study focused on comment fields from the perspective of deliberation. It found that comment fields are mostly deliberative because they facilitated the analytic process by keeping to the theme of the issue, providing critical reasoning in arguing, contributing new information to help understand the issue, but the use of sources is significantly rare. If we take the reader comment fields as a debating forum, criticizing reasoning dominates the forum which testifies to the usefulness of the platform to voice different views and opinions. For the social process, the interactions are mostly made with the articles suggesting readers pick up points rather than pick on people, and the second frequent type of interaction was with other commenters.

On the emotional side, majority of the comments did not carry any emotional words, and only a small portion had some emotional disposition which suggests that most readers are serious in debating issues and remain calm in deliberating. With regards to the relationship between the analytic process and the social process, most of their pair-wise dual relationships were not meaningful and significant *except for the one between reasoning and emotion*. In particular, neutral emotions were more likely to be associated with alternative arguments. In other words, alternative-argument (reasoning) comments tend to have more neutral disposition orientations. It may be because alternative argument comments focus on reflecting, thinking, and reasoning to make constructive suggestions. As a result, they tend to be more detached emotionally than criticizing comments and no-reasoning comments. But the overall trend of emotion discharge indicates neutral feeling is much more dominant than degrading emotion in comment fields.

As is discussed in the literature review, public participation in journalism creates a dynamic egalitarian public space where citizens converse for deliberation to achieve understanding of issues. Though there are some criticisms on comment fields in that the quality is poor and the posts are irrational (Richardson & Stanyer, 2011; Reich, 2011), the findings of this study suggest most of the comments are serious and contributing to issue understanding or deliberation, which is in line with the findings by most researchers (Graham & Wright, 2015; Tumber, 2001; UGC, 2012). There is no denying that some comments are emotional or degrading and provide no reasoning in discussing issues, but such comments only constitute a smaller portion of the comment sample.

The originality of the study lies in analyzing reader comments posted on an international online news outlet by applying the deliberation model's two different processes proposed by Manosevitch and Walker (2009) and Graham (2008). Furthermore, the study explored the potential relationship between the two processes. The identified significant relationship between reasoning and emotions indicates that the analytic and the social process are not so independent from each other. There may be overlap between them, and there can be correlations in existence. For instance, what is the role of degrading feelings comments in the criticizing reasoning comments? Does criticizing others always lead to degrading feeling? And does praising or supporting others would always lead to positive and optimistic feelings? This study doesn't have enough data points to analyze this relationship. But it would be very insightful to learn about it in the future research projects.

It may still be too optimistic to conclude that the relationship between journalists and readers has totally changed as suggested by Robinson (2010) or by Loke (2012), but it is true that online news readers have more freedom to express themselves (Gao & Koo, 2014) and the anonymous nature encourages openness and boldness not silenced by dominant opinions (Liu & Fahmy, 2011). Criticizing comments and alternative-view comments in reasoning are found to be significantly more and conductive to deliberation in this case study of the Diaoyu/Senkaku Islands dispute.

It is very unfortunate that mainstream media are not very receptive to the practice of reader comments either because they believe in "innate conservatism"

(Thurman, 2007) or because the moderation of reader comments is difficult and time consuming (Ellis, 2015). However, the benefits of maintaining reader comments outweigh the negatives. It is true that the quality of comments must be improved and moderated, but it should not stop news organization from strategically thinking about participatory journalism and creatively pursuing the greater use of comment fields. After all, as a deliberation space, comment fields offer alternative views and sources, enhance critical reflection on stories and issues and promote democratic values of debating, transparency, involvement, and participation. And it seems that there is hope that the AI new technology can help address the challenge of reader comment moderation. With that in mind journalism professionals may want to consider bringing back comment fields.

Limitations and Suggestions

This study only analyzed one online publication with 103 comments due to the fact that it was extremely difficult to access reader comments. Such a small and convenient sample makes the generalizations about other online publications impossible. The exploratory nature of the study can't draw inclusive conclusions especially about the correlation between reasoning and emotion. Moreover, the study didn't collect information on commenters' background or political views. Therefore, the account on why the commenters made those comments was only speculative at best. Most of the variables such as theme relevance, reasoning, facts, interactions and emotions were measured at the lowest level of measurement, nominal, which limited the statistical analysis and the in-depth quantitative approach to the study. However, this study did attempt to try to sample a non-traditional but dedicated current affairs news website for exploration, and it did provide a snapshot of how online news reader comments manifest and work on an online news publication, and how they relate to the deliberation nature of a controversial issue. The research along the line should be much more, and the relationship between the social process and the analytical process from the deliberation perspective would be a very hopeful field to pursue and theorize.

References

Bowman, S., Willis, C. (2003). *We Media: How audiences are shaping the future of news and information*. Published online in PDF format, July 2003 and also published online in HTML at: www.hypergene.net/wemedia/.

Dahlberg, L. (2004). Net-public sphere research: beyond the "First Phase." *Javnost-The Public*, *11*(1), 5–22.

David, C. (2007). Learning political information from the news: a closer look at the role of motivation. In *Conference Papers -- International Communication Association, 1*.

Ellis, J. (2015, September 16). *What happened after 7 news sites got rid of reader comments*. Nieman Lab.

Finley, K. (2015). *A brief history of the end of the comments*. WIRED.

Fröhlich, R., Quiring, O., Engesser, S. (2012). Between idiosyncratic self-interests and professional standards: a contribution to the understanding of participatory

journalism in Web 2.0. Results from an online survey in Germany. *Journalism*, *13*(8), 1041–1063.

Gao, Y., Koo, T. T. (2014). Flying Australia–Europe via China: a qualitative analysis of the factors affecting travelers' choice of Chinese carriers using online comments data. *Journal of Air Transport Management*, *39*, 23–29.

Gillmor, D. (2004). *We the media*. Sebastopol, CA: O'Reilly Media.

Graham, T. (2008). Needles in a haystack: a new approach for identifying and assessing political talk in nonpolitical discussion forums. *Javnost—The Public*, *15*(2), 5–24.

Graham, T., Wright, S. (2015). A tale of two stories from reader: comment fields at the Guardian. *The International Journal of Press/Politics*, *20*(3), 317–338.

Harrison, J. (2010). User-generated content and gatekeeping at the BBC hub. *Journalism Studies*, *11*(2), 243–256.

Hopp, T., Santana, A. (2012). Driving the dialogue: a media-use profile of online newspaper commenters. Paper presented at the *Annual Conference of International Communication Association*. Phoenix, AZ: May 24-28.

Jensen, J. L. (2003). Public spheres on the Internet: anarchic or government-sponsored: a comparison. *Scandinavian Political Studies*, *26*(4), 349–374.

Kovacs, K. (2020, March 5). *Comment sections aren't dead (yet)*. Digital Content Next.

Lecheler, S., Keer, M., Schuck, A. R. T., Hänggli, R. (2015). The effects of repetitive news framing on political opinions over time. *Communication Monographs*, *82*(3), 339–358.

Liu, X., Fahmy, S. (2011). Exploring the spiral of silence in the virtual world: individual's willingness to express personal opinions in online versus offline settings. *Journal of Media and Communication Studies*, *3*, 45–57.

Livingstone, S., Lunt, P. (1994). *Talk on television*. New York: Routledge.

Loke, J. (2012). Old turf, new neighbors: journalists' perspectives on their new shared space. *Journalism Practice,* 6(2), 233–249.

Loviglio, J. (2002). Vox Pop: network radio and the voice of the people. In M. Hilmes, J. Loviglio (eds.), *Radio Reader: Essays in the Cultural History of Radio*, 89–106. New York and London: Routledge.

Manosevitch, E., Walker, D. (2009). Reader comments to online opinion journalism: a space of public deliberation. *International Symposium on Online Journalism*, *10*, 1–30.

Nip, J. M. (2008). The last days of civic journalism. *Journalism Practice*, *2*(2), 179–196.

Nord, D. (2001). *Communities of journalism*. Urbana and Chicago: University of Illinois Press.

Norris, P (2000). *A virtuous circle: political communications in postindustrial societies*. Cambridge: Cambridge University Press.

Reich, Z. (2011). User comments: the transformation of participatory space. In J. B. Singer, A. Hermida, D. Domingo, A. Heinonen, S. Paulussen, T. Quandt, Z. Reich & M. Vujnovic (eds.), *Participatory Journalism: Guarding Open Gates at Online Newspapers,* 96–117. New York, U.S.: Wiley-Blackwell.

Richardson, J. E., Stanyer, J. (2011). Reader opinion in the digital age: Tabloid and broadsheet newspaper websites and the exercise of political voice. *Journalism*, 1–21.

Robinson, S. (2010). Traditionalists vs. convergers: textual privilege, boundary work, and the journalist—audience relationship in the commenting policies of online news sites. *Convergence*, *16*(1), 125–143.

Ruiz, C., Domingo, D., Micó, J. L., Díaz-Noci, J., Meso, K., Masip, P. (2011). Public sphere 2.0? The democratic qualities of citizen debates in online newspapers. *International Journal of Press/Politics*, 16(4), 463–487.

Santana, A. D. (2014). Virtuous or vitriolic. *Journalism Practice*, *8*(1), 18–33.

Schneider, S. M. (1997). *Expanding the public sphere through computer-mediated communication: political discussion about abortion in a usenet newsgroup*. Doctoral Dissertation. Cambridge, MA: MIT.

Shepard, A. C. (1994). *The gospel of public journalism*. Available at: http://ajrarchive.org/ article.asp?id=1650.

Thurman, N. (2007). The globalization of journalism online: a transatlantic study of news websites and their international readers. *Journalism*, *8*, 285–307.

Tumber, H. (2001). Democracy in the information age: the role of the fourth estate in cyberspace. *Information, Communication & Society*, *4*(1), 95–112.

UGC and Participatory Journalism (2012). Paper presented at the *Annual Conference of the International Communication Association*, Phoenix, AZ.

Wayback Machine (n.d.) Wikipedia. Available at: https://en.wikipedia. org/wiki/Wayback _Machine.

Welch, D. A. (2013, December 9). *What's an ADIZ? Why the United States, Japan, and China get it wrong*. Foreign Affairs.

Wikimedia Foundation (2021, May 14). *The Diplomat*. Wikipedia.

Williams, A., Wardle, C., Wahl-Jorgensen, K. (2011). Have they got news for us? *Journalism Practice*, *5*(1), 85–99.

Zandt, D. V. (2020, October 27). *The Diplomat Magazine*. Media Bias/Fact Check. Available at: https://mediabiasfactcheck.com/the-diplomat-magazine/.

Russia's War in Ukraine and Media Solidarity (Case of Georgia)

By Mariam Gersamia[*], Ekatherine Gigauri[±], Salome Mamasakhlisi[°], Mikheil Bodokia[•] & Mariam Nakoevi[♦]

This paper delves deeply into the pivotal role that solidarity journalism plays in shaping media discourse, particularly during times of wartime and crisis, with a central focus on its profound impact during the course of Russia's war on Ukraine. By conducting a thorough investigation into the multi-dimensional aspects of solidarity journalism, this study delves into the intricate strategies media outlets employ to utilize various indicators of solidarity. These strategies are deployed not only to foster collective stress resistance, but also to provide essential psychological support to audiences during periods of upheaval. The paper emphasizes the importance of media's portrayal of prosocial behaviors and positive micro-moments, which collectively contribute to the reinforcement of resilience within communities when they are facing challenging circumstances. To contextualize its findings, the paper offers a detailed analysis of the specific case of Russia's war on Ukraine. In doing so, it underscores the instrumental role that media solidarity plays in empowering the communities directly affected by such conflicts. By leveraging solidarity journalism's inherent capacity to foster unity and resilience, media outlets can significantly contribute to mitigating the often-negative effects of fear-laden narratives during times of wartime.

Keywords: Ukraine, Georgia, solidarity journalism, wartime media discourse, media solidarity indicators

Introduction

In February 2022, the global community bore witness to a full-scale war initiated by Russia against Ukraine, resulting in catastrophic attacks on both the nation and its civilian populace. With the progression of digital technologies, accessing real-time updates about the war became increasingly convenient. Traditional and social media platforms played a pivotal role in disseminating timely information to the public regarding the ongoing situation. The proliferation of digital technologies has fundamentally transformed news consumption during wartimes. A multitude of groups, pages, and applications on traditional and social media platforms have emerged, dedicated to promptly delivering up-to-the-minute information to a worldwide user base. This unprecedented accessibility has

[*]Professor, Ivane Javakhishvili Tbilisi State University, Georgia.
[±]Fellow, Media and Communication Educational-Research Center "Media Voice", Georgia.
[°]Fellow, Media and Communication Educational-Research Center "Media Voice", Georgia.
[•]Fellow, Media and Communication Educational-Research Center "Media Voice", Georgia.
[♦]Fellow, Media and Communication Educational-Research Center "Media Voice", Georgia.

empowered individuals to remain well-informed about the ongoing war in a more efficient manner than ever before.

As the transition to the active phase of Russia's war in Ukraine unfolded, there emerged an unprecedented **global media solidarity with Ukraine.** This solidarity extended to Georgian media, which launched an extensive campaign in February 2022 to demonstrate support. This campaign underscored the industry's dedication to informing its audience about unfolding events and the war's impact on civilians. Displays of solidarity and support from media outlets hold substantial significance during periods of conflict and war. Importantly, the extensive reach of Georgian media facilitated the dissemination of crucial information to a wide spectrum of the population, thereby fostering awareness, empathy, and understanding. Indeed, as Kitty (2005) posited, "war is an audience prey, regardless of whether or not war is a direct threat to viewers and readers" (p. 140). This paper underscores the indispensable role of media solidarity in cultivating an informed and compassionate global audience during times of crisis.

This paper presents a media analysis of Georgian media's solidarity with Ukraine, shedding light on the pro-social media mechanisms activated during war coverage and tragic events. It also explores potential avenues for media to demonstrate solidarity and support while accurately reporting on human rights and identifying areas for improvement, particularly when addressing vulnerable groups and events.

The research addresses the following inquiries:

1. What are the primary characteristics and frequency of solidarity demonstrations employed by the media?
2. What are the common and divergent approaches adopted by broadcasting companies when demonstrating solidarity in a polarized context?
3. Which sources and statements do media outlets rely on when expressing solidarity?

The study delves into the pro-social mechanisms activated by the media during wartime, spotlighting the evolving media agenda and the dynamics of solidarity demonstration within Georgian media. Given the limited number of studies on solidarity during wartime, there is currently no comprehensive overview of wartime coverage analysis from a solidarity journalism perspective, which according to Varma (2023) means prioritizing marginalized people's definitions, shared conditions, and ongoing struggles

Literature Review

In the midst of conflicts, particularly during wartime, the media and an informed society wield considerable influence in the pursuit of peacebuilding endeavors. This paper delves into the convergence of goals between solidarity and peace journalism, emphasizing the pivotal role of audience inclusion. Joseph (2014) explores the role of global mass media in contemporary international

conflicts and advocates for the adoption of "peace journalism" as an alternative framework for conflict coverage. This perspective calls for a fresh strategy that fully harnesses the media's potential in conflict resolution. According to the author, the media grapples with diverse limitations when covering international conflicts, encompassing individual, state, organizational, or ideological constraints. In this context, it is imperative to view the media as a "social institution." To ensure psychological well-being for media users, systematic media monitoring and the promotion of solidarity journalism during wartime become indispensable.

As posited by Lotman (2007, p. 209) and cited by Ventsel et al. (2021), the efficacy of fear discourse hinges upon its ability to resonate with the audience's cultural memory. Anticipating impending threats serves as an amplifying factor for fear induction. Ventsel et al. (2021) expound that Russia frequently employs fear as a strategic communication tool, harnessing the discursive construction of fear through manipulation of enigmatic messages and numerical data. In this context, the cultivation of resilience and solidarity within diverse media audiences assumes significance as a countermeasure against the pervasion of fear-laden atmospheres and discourse prevalent during periods of conflict.

Solidarity journalism serves as both a psychological support tool and a means of bolstering stress resilience for the broader public, fostering positive micro-moments, and reinforcing solidarity toward vulnerable groups. The demonstration of solidarity within the media sphere is not a new concept. It is noteworthy that the Georgian media landscape has primarily been characterized by fragmentation, often arising in response to specific stories or events that last only a few days. However, the solidarity displayed toward Ukraine was not merely an editorial stance or a one-time display of support from select groups. Instead, expressing solidarity with Ukraine has become an ongoing facet of the media's agenda, intrinsically linked to Georgia's national interests and the preservation of its identity.

Solidarity not only plays a pivotal role in advancing journalism's quest for truth (Varma, 2023), but it also assumes an additional function: bolstering collective stress resistance by furnishing psychological sustenance during times of crises. This role is achieved by spotlighting prosocial actions and fostering positive micro-moments. In the context of armed conflict, solidarity journalism becomes instrumental in providing comprehensive support and accurate reportage for victims and refugees from multifaceted perspectives. An illustrative example lies in the coverage of Russia's aggression against Ukraine, where both global and Georgian media played a role in encouraging Ukrainians.

In crisis situations, the role of pro-social media in society is further enhanced through demonstrations of solidarity. This effect intensifies during war, as individuals seek behavioral models and positive emotions, such as hope, empathy, compassion, joy, love, humor, inspiration, and gratitude, within media content. The empathy, support, and solidarity depicted by and toward various individuals and groups in the media serve as emotional stimuli, even in stressful and apparently hopeless circumstances. This motivation compels media users toward prosocial actions, including participation in solidarity initiatives and engagement in charitable activities.

Media consumers express solidarity both on an individual and societal level. During crises and wartime, solidarity has the potential to spread virally. Makhortykh and Bastian (2022) assert that "news personalization can influence conflict reporting in non-Western media systems characterized by limited press freedom" (Makhortykh & Bastian, 2022). The authors explore the impact of technological innovations on news distribution, particularly by examining the use of algorithmic personalization systems.

The extensive solidarity media campaign in Georgia following Russia's invasion of Ukraine can be attributed to several factors:

1. Common enemy: Both countries share a history of Russia's aggressive policies and imperialist intentions, with Georgia having experienced territorial occupation by Russia. Prior to the 2022 conflict, Georgia had already been embroiled in several conflicts (war in 2008) with the Russian Federation.
2. Geographical proximity: The war's relative proximity to Georgia heightened interest in the conflict.
3. National interests: Demonstrating solidarity aligned with national interests plays a pivotal role in shaping a nation's external image. Additionally, shared national interests between Ukraine and Georgia regarding integration into Euro-Atlantic structures further contributed to the solidarity campaign.

Regarding the Georgian media landscape, in the press freedom index (RwB, 2023), Georgia ranks 77th out of 180 countries. The media environment is pluralistic yet significantly partisan (Freedom House, 2023), with the country designated as partly free and ranked 58th out of 100. As the conflict unfolded, the media agenda underwent dynamic evolution. Significantly, in 2022, Ukraine, Georgia, and Moldova pursued European Union membership, and progress toward this goal became a central focus of media coverage, sparking engaging discourse for analysis and discussion.

Research Methodology and Procedures

A mixed-method approach, integrating both quantitative and qualitative methods, was employed in this research. Content analysis was utilized for rigorous media monitoring, facilitating an in-depth investigation. To ensure methodological consistency and data accuracy, a comprehensive coding guideline was developed, encompassing primary categories pertinent to solidarity indicators. Throughout the monitoring process, the coding framework was enriched by the incorporation of secondary categories.

The investigation of solidarity manifestations within the media focused specifically on traditional broadcasters, with an emphasis on television channels that constituted the principal source of information for a substantial portion of the audience during the research timeframe. The selected channels encompassed the following: Broadcasting Company "Rustavi 2," Broadcasting Company "Main

Channel," Broadcasting Company "Formula," Broadcasting Company "TV First," Broadcasting Company "Imedi," and Georgian Public Broadcasting - First Channel.

Observations were conducted during the primary news broadcasts and special programs aired during primetime, the period between 20:00 and 23:00, which traditionally garners the highest viewership.

The research period was bifurcated into two distinct phases:

I. February 25 - March 6, 2022: The initial phase marked the emergence of media solidarity, characterized by comprehensive coverage of Russia's invasion of Ukraine and the initiation of hostilities.
II. May 10, 2022: The second phase, occurring two months subsequent to the onset of the Ukraine war, aimed to gauge the continuity of solidarity patterns within the media.

The selection of specific calendar days were executed through probabilistic sampling, specifically employing the "Structured by Week" method. Over the research duration, approximately 250 hours of media content, encompassing 1554 television segments, underwent comprehensive analysis, leading to the identification and processing of 3,170 solidarity indicators.

The process of media monitoring culminated in the identification of both primary and additional characteristics of solidarity, along with their frequency of occurrence in the media. Furthermore, the study discerned the principal sources of solidarity expressions and explored disparities in how diverse channels conveyed solidarity, while also pinpointing shared attributes. The predominant and ancillary features identified were ranked based on their frequency. A comparative analysis was undertaken between outcomes obtained during the initial and subsequent phases of the research.

Results and Discussion

The investigation's initial phase, spanning a 10-day period from February 25 to March 6, entailed the meticulous analysis of 854 prime-time segments originating from six broadcasting companies. The scrutinized content constituted an aggregate of approximately 120 hours, spanning diverse formats like news segments, narratives, live broadcasts, and talk shows.

Notably, during the war's early days, each broadcasting company deployed camera crews to Ukraine, facilitating firsthand coverage of unfolding events. Table 1 presents a comprehensive overview of material distribution, focusing on topics related to Ukraine, within the primary news outlets of the Georgian media.

Table 1. Distribution of Materials on Ukrainian Topics in Main News Outlets

Media content	Whithout context with Ukraine	In context with Ukraine	SUM
Public Broadcaster	48	132	180
Rustavi 2	31	75	106
Imedi	30	130	160
Mtavari TV	29	89	118
TV Pirveli	16	155	171
Formula TV	14	105	119
SUM	168	686	854

The table provides a clear depiction of the pronounced dedication, amounting to no less than 70%, of media outlets to coverage related to Ukraine. Notably, "Rustavi 2" exhibited the least content in the context of Ukraine, accounting for 71%, while "TV First" exhibited the highest dedication with 91%. Collectively, an appreciable 80% of the materials featured in news programs centered on the subject of Ukraine.

During the research period, the vigilance of media monitoring revealed a total of seven distinctive categories through which media solidarity with Ukraine was expressed. These categories, indicative of the diverse manners in which media outlets showcased solidarity, are delineated in Table 2.

Table 2. Categories of Media Solidarity

N	Solidarity categories
1.	Symbols, signs, indices supporting Ukraine
2.	Statements of solidarity
3.	Expressing gratitude for support
4.	Solidarity demonstrations
5.	Solidarity awareness raising information
6.	Sanctions as an expression of solidarity with Ukraine
7.	Dictionary of solidarity: media language and context

Categories of Solidarity:
  1. **Symbols, Signs, and Indicators of Support for Ukraine:**
     - Solidarity slogan "Слава Украине, Героям Слава" (Glory to Ukraine, Glory to the Heroes)
     - Slogan expressing solidarity with a context of mockery: "Putin kh***o"
     - #hashtags expressing solidarity
     - Symbolism of the state of Ukraine (flag, coat of arms, anthem)
     - Graphic representation of the map of Ukraine
     - Colors of the flag of Ukraine in studio decoration
     - Colors of the flag of Ukraine in the dress code of presenters/media
     - Colors of the flag of Ukraine on the channel's microphone
     - Colors of the flag on the channel's logo
     - Solidarity graffiti on the streets
     - Prosocial shots/episodes

- Anthem of Georgia (in the context of solidarity with Ukraine)

2. **Statements of Solidarity:**

   2.1. Organizations on whose behalf the announcements were made:

   - Broadcasting companies
   - Patriarchate of Georgia
   - International organizations
   - "Anonymous" hacker organization

   2.2. **Organizations and groups whose representatives issued the statements:**

   - Opposition representatives
   - Government representatives
   - Representative of the Embassy of Ukraine in Georgia
   - Foreign politicians
   - Representatives of non-governmental organizations
   - Representatives of religious organizations
   - The Fourth President (Salome Zurabishvili)
   - The Third President (Mikheil Saakashvili)
   - Georgian citizens (including recognizable faces)
   - Activists
   - Ukrainians in Georgia
   - Russian citizens and ethnic Russians in Georgia
   - Ethnic Russians living abroad and/or in Russia
   - Ukrainians in shelters and refugees
   - Georgians in Ukraine
   - Foreign citizens (including famous people)
   - Others

3. **Expressing Gratitude for Solidarity from the Government of Ukraine:**
   - From the side of the President of Ukraine, Volodymyr Zelensky
   - From Ukrainian politicians
   - Thank you to the Georgian people

4. **Solidarity Actions:**
   - Solidarity actions held abroad
   - Solidarity actions held in Georgia (including live broadcasts)

5. **Solidarity and War Loss Awareness:**
   - Charitable campaigns conducted by media organizations (fundraising)
   - Mobilization of humanitarian aid
   - Statistics of the dead and injured in the war
   - Engagements, interviews from the battlefield (including recognizable faces)

6. **Coverage of Sanctions as an Expression of Solidarity:**
   - Famous brands leaving the Russian market
   - Boycott of Russian brands in Georgia
   - Sanctions against Russia worldwide

7. **Glossary of Solidarity: Media Language and Context:**

- In the context of Russia: Emphasis on the word "occupier" and Russia's role in starting the war; Provocations by Ukraine emphasized from Russian sources.
- In the context of Ukraine: Mention of the brotherly nation and friendly country.
- In the context of the national interests of Georgia: Commemoration of the 2008 Russia-Georgia war; Parallel to the war in Abkhazia; Presentation of Russia as a common enemy; Highlighting dangers in Georgia after the war in Ukraine; Mention of past aid provided by Ukraine to Georgia.
- Ukrainian humor in media coverage: Inclusion of slogans and incidents expressing humor related to Russia and Ukraine.

According to the analysis of the first six categories, the Georgian media most frequently expressed solidarity by covering supporting statements made by individual organizations, groups, and specific individuals. Solidarity rallies were covered with the least frequency, although it should be noted that the airtime allocated to the rallies often encompassed the entire news broadcast. Table 3 presents the frequency of coverage of solidarity categories on television.

Table 3. Frequency of Use of Media Solidarity Categories

media solidarity categories	Frequency
Statements of solidarity	49%, n=1280
Symbols, signs, indices supporting Ukraine	21%, n=556
Expressing gratitude for support from Ukrainian government	11%, n=282
Solidarity awareness raising information	10%, n=258
Sanctions as an expression of solidarity with Ukraine	5%, n=141
Solidarity demonstrations	4%, n=110
Sum	100%, n=2627

Out of the 2,627 indicators employed in media coverage, 49% stemmed from statements conveying solidarity, while 21% originated from symbols, signs, and indications of support. Table 3 visually represent the distribution frequency of the six categories of media solidarity.

Overall, TV First exhibited the most pronounced utilization of all solidarity categories, constituting 25% of the indicators. In contrast, TV Company "Imedi" and "Rustavi 2" showcased the lowest usage of solidarity categories, accounting for 14% and 11% respectively. Quantitative data outlining the distribution frequency of the six categories of media solidarity across TV stations is detailed in Table 4 provides a representation of the distribution patterns.

Table 4. Distribution Frequency of Six Categories of Media Solidarity in TV Stations

Category	Public Broadcaster	Rustavi 2	Imedi	Main Channel	TV First	Formula TV	Sum
Signs: symbols, icons, indixes	85	51	69	106	131	114	556
Statements	208	128	184	181	368	211	1280
Expressing gratitude for support from Ukrainian government	45	35	42	47	77	36	282
Solidarity demonstrations	15	13	8	12	25	37	110
Raising awareness	64	34	39	25	38	58	258
Sanctions	22	20	30	25	26	18	141
Sum	439	281	372	396	665	474	2627

In the initial phase of the research, it is evident that the category of symbols, signs, and indices of solidarity was the most frequently employed, with "TV First" utilizing it most frequently (24 times), and "Rustavi 2" featuring it the least (9 times). Similarly, statements containing expressions of solidarity were most prominently featured by "TV First" (29%) and least by "Rustavi 2." Notably, coverage of statements originating from the Ukrainian government was most prevalent on "TV First" (27.3%) and least on "Rustavi 2." Concerning solidarity actions, "Formula" presented the highest coverage (33%), while awareness-raising content was most extensively employed by the public broadcaster (25%), and least by "Main Channel" (10%). In terms of information concerning sanctions (in the context of solidarity), "Imedi" displayed it most frequently (21%), while "Formula" exhibited it least (13%).

During the second phase of the research, spanning 10 specific calendar days in the month of May (2, 4, 6, 10, 12, 14, 18, 23, 26, and 31), a total of 700 materials from the primary news programs of the six broadcasting companies underwent analysis. These materials encompassed a range of formats, including news segments, stories, live broadcasts, and talk shows, aggregating to approximately 120 hours. Table 5 provides a comprehensive overview of the materials centered around Ukraine within the main news outlets of RBA during the second research phase.

Table 5. Materials Covered in the Context of Ukraine (Second Research Phase)

Media content	Without context with Ukraine	In context with Ukraine	Sum
Public Broadcaster	93	42	135
Rustavi 2	82	66	148
Imedi	76	37	113
Main Channel	48	13	61
TV first	55	31	86
Formula	73	84	157
Sum	427	273	700

As discernible from Table 6, two months following the commencement of Russia's war in Ukraine, a noticeable shift in the media agenda has transpired. Over this phase, a total of 273 materials were encompassed within the context of Ukraine, featuring 434 solidarity indicators. This reflects a substantial decrease of 2,193 indicators in comparison to the data derived from the first research phase. Moreover, owing to the observational nature, the number of categories that articulate media solidarity has been streamlined.

Over the entire research duration, within the purview of solidarity with Ukraine, media monitoring identified a consolidated total of 5 categories of media solidarity. Quantitative content analysis was employed to dissect these five categories. The hierarchical ranking of these categories is meticulously delineated in Table 6.

Table 6. Frequency of Use of Media Solidarity Categories (Second Phase: May)

N	Solidarity Categories	Sum
1.	Symbols, signs, indices supporting Ukraine	184
2.	Solidarity awareness raising information	132
3.	Coverage of Ukrainian Government's activities	54
4.	Sanctions as an expression of solidarity with Ukraine	33
5.	Solidarity media language and context	33

As illustrated in the table, during the second phase of the investigation, 42% of the solidarity indicators emanated from symbols embodying solidarity, while 30% were drawn from awareness-raising information. The comprehensive hierarchy of indicators during the second phase of the study, classified by broadcasting companies, is meticulously laid out in Table 7.

Table 7. Frequency of Media Solidarity Indicators by Broadcasting Companies (Second Phase)

Categories	Public Broadcaster	Rustavi 2	Imedi	Main Channel	TV First	Formula	Sum
Signs	39	27	50	32	7	27	182
Awareness raising information	33	12	7	1	1	0	54
Ukrainian Government's activities	48	15	39	6	12	12	132
Sanctions	8	8	1	3	0	13	33
Solidarity media language and context	8	8	1	3	0	13	33
Sum	**136**	**70**	**98**	**45**	**20**	**65**	**434**

Table 7 shows that, in total, in the second phase, the public broadcaster used solidarity categories the most (33%, n=146), followed by "Imedi" (23%, n=100), "Rustavi 2" 65 (15%, n=65), "Formula" (14%, n=60), "Main Channel" (10%, n=42) and "TV First" (5%, n=21).

During the second phase of the study, the absence of emergency broadcasts or announcements on any channel indicates a significant decline in urgent and crisis-related news coverage compared to the first phase. In the initial phase, a total of 134 emergency broadcasts and announcements were aired across different channels, underlining the heightened news intensity during the conflict's early days. However, the media agenda shifted during the second phase towards other political subjects, particularly those critical of the government. Three specific topics gained prominence in the coverage of "Formula," "TV First," and "Main Channel":

1. **Prospect of EU Candidate Status:** Media outlets centered their attention on discussions and updates related to Georgia's aspiration to become a candidate for EU membership. This topic gained significance due to its alignment with Georgia's geopolitical aspirations and its ties to the European community.
2. **Arrest of Nika Gvaramia:** Media closely monitored developments surrounding the arrest of Nika Gvaramia, a notable political figure, resulting in a substantial political event or controversy.
3. **Mikheil Saakashvili's Health Deterioration:** Media highlighted the health status of Mikheil Saakashvili, a former Georgian president, and influential political figure, potentially due to his role in Georgian politics and his involvement in the public sphere.

These shifts in the media agenda signify a move from the initial crisis coverage to other pivotal political events and developments in Georgia. This transition could have influenced the discourse on Ukrainian solidarity, potentially leading to varied perspectives or levels of coverage for the solidarity indicators during the second research phase.

The first category of media content related to solidarity is "Solidarity Symbols, Signs, Indices." This category encompasses diverse audio-visual cues and indicators that express support and solidarity for Ukraine. The indicators within this category encompass:

1. **Solidarity slogan "Слава Украине, Героям Слава":** This slogan translates to "Glory to Ukraine, Glory to the Heroes" and is a common expression of solidarity with Ukraine.
2. **The solidarity slogan with a mocking context: "Putin kh***o":** This slogan conveys solidarity with Ukraine while also ridiculing Russian President Vladimir Putin. Please note that the word has been censored for inappropriate language.
3. **#Hashtags expressing solidarity:** The use of hashtags on social media to convey solidarity with Ukraine and related events.
4. **Symbolism of the Ukrainian state (flag, coat of arms, anthem):** Visual representations of the Ukrainian flag, coat of arms, and the playing of the Ukrainian national anthem to demonstrate solidarity.

5. **Graphic representation of the map of Ukraine:** Displaying maps or graphics depicting Ukraine to symbolize support.
6. **Colors of the Ukrainian flag in studio decoration:** Adorning the studio or set with colors resembling the Ukrainian flag.
7. **Colors of the Ukrainian flag in the dress code of presenters:** Presenters wearing clothing incorporating the colors of the Ukrainian flag.
8. **Colors of the Ukrainian flag on the channel's microphone:** Attaching stickers or displaying the colors of the Ukrainian flag on the microphones used by the channel's presenters.
9. **Ukrainian flag colors on the channel's logo:** Integrating the colors of the Ukrainian flag into the logo or branding of the broadcasting channel.
10. **Solidarity graffiti on the street:** Street art or graffiti conveying messages of solidarity with Ukraine.
11. **Prosocial shots/episodes:** Broadcasting positive and supportive content related to Ukraine, such as acts of kindness, humanitarian efforts, or positive stories from the conflict.
12. **Anthem of Georgia (in the context of solidarity with Ukraine):** Playing the national anthem of Georgia to express solidarity with Ukraine.

During the first 10 days after the war's initiation, "TV First" demonstrated the highest utilization of the "Solidarity Symbols, Signs, Indices" category in its coverage, featuring these indicators 131 times, accounting for 24% of the total indicators in this category. Notably, Ukrainian state symbols (anthem, flag, coat of arms) were prominently displayed and/or sounded within the studio of "TV First."

Other television stations also actively incorporated indicators from this category. "Formula" utilized them in 21% of their coverage (n=114), "Main Channel" in 19% (n=106), the public broadcaster in 15% (n=85), "Imedi" in 12% (n=69), and "Rustavi 2" in 9% (n=51). Within the "Solidarity Symbols, Signs, Indices" category, television stations predominantly focused on three indicators, which were frequently featured in their coverage:

1. **State symbols of Ukraine (flag, coat of arms, map):** Displaying and representing the national symbols of Ukraine to demonstrate support and solidarity.
2. **Displaying solidarity graffiti:** Broadcasting images of graffiti and street art expressing solidarity with Ukraine.
3. **Prosocial shots/episodes:** Presenting positive and supportive content related to Ukraine, such as acts of kindness, humanitarian efforts, or positive stories from the conflict.

Throughout the research period, all television stations included prosocial episodes in their coverage. A total of 76 such episodes were covered, showcasing acts of support and kindness related to the conflict in Ukraine. The most pro-social and positive frames/episodes were recorded on "TV First" (21%, n=27) and the public broadcaster (22%, n=19). These episodes featured heart-warming scenes, including a Ukrainian soldier playing the piano and boosting the morale of fellow

soldiers, a Ukrainian child singing to uplift spirits in bunkers, and a restaurant in Ukraine offering free meals to military personnel and others.

Furthermore, some television channels integrated indicators such as incorporating the colors of the Ukrainian flag into the dress code of presenters. For instance, during the first research phase, 17 journalists on Rustavi 2, 13 journalists on "Mtavari Akhis," 10 journalists on "TV First," 8 journalists on "Formula," and 3 journalists on "Imedi" donned accessories or clothing featuring the state symbols of Ukraine.

However, using the colors of the Ukrainian flag on the channel's microphone was relatively infrequent, observed only once when a journalist on "TV-Pirveli" affixed a Ukrainian flag sticker to the microphone of the TV channel. Additionally, during the first phase of the research period, the anthems of both Ukraine and Georgia were played on all channels, emphasizing the connection and solidarity between the two nations during this critical time.

In the first research phase, various solidarity-related hashtags were noted on air across three broadcasting companies:

1. **Public Broadcaster - Channel One** used hashtags such as #StandWithUkraine, #RussiaInvadedUkraine, and #TBILISI4UKRAINE to express solidarity with Ukraine.
2. **"TV First"** employed hashtags such as #РоссияОставысяДома, #StopPutin, #StopWar, and #TheWholeWorldIsWatching in their coverage to convey solidarity.
3. **"Formula"** used the hashtag #Gharibashvili does not express my position in the context of expressing solidarity.

Furthermore, the slogan "Слава Украине, Героям Слава" (Glory to Ukraine, Glory to the Heroes) was used by all broadcasting companies during the first research phase as an expression of solidarity. The frequency of usage of this slogan by different channels is as follows:

- "TV First" used the slogan 31 times (24% of its indicators in this category).
- "Main Channel" used the slogan 28 times (23%).
- "Formula" used the slogan 27 times (22%).
- "Imedi" used the slogan 18 times (15%).
- Public broadcaster used the slogan 11 times (9%).
- "Rustavi 2" used the slogan 9 times (7%).

In the second research phase (May 2022), "Imedi" utilized solidarity symbols, signs, and indices the most, comprising 27% of the indicators in this category (n=50). However, the frequency of solidarity indicators decreased compared to the first phase. For example, graffiti expressing solidarity was no longer visible in the frame, and the slogan "Слава Украине, Героям Слава" was primarily heard in stories, with the majority of mentions on the air of the "Main Channel" (83%, n=10).

During the second research phase, remarkable pro-social frames and episodes were also observed, with "Rustavi 2" predominantly featuring them (14 times, 88% of such episodes). These pro-social episodes showcased amateur footage from the battlefield, including a lecturer conducting an online lecture from the front line, the story of a clergyman serving as a soldier, and narratives from Azovstal, spotlighting acts of courage and resilience amidst the conflict.

Moving on to the category of "Statements of Solidarity," it encompasses all the solidarity-containing statements broadcast by the broadcasting companies during the first 10 days of media monitoring after the war's commencement. These statements expressed solidarity from various entities, including the Georgian government, president, opposition, non-governmental organizations, citizens, foreign politicians, and others.

Among the broadcasting companies, "TV First" aired the most solidarity statements, with 368 instances, followed by "Formula" with 211, public broadcaster with 208, "Imedi" with 184, "Main Channel" with 180, and "Rustavi 2" with 128. However, it's essential to note that there was a downward trend in the number of announcements across all broadcasting companies from the first to the tenth day. For instance, on February 25, 2022, 192 supportive statements were broadcast on research televisions, and by March 5, the number had reduced to 85.

The following indicators were most prominent in this category during the Second phase:

1. **Statements of solidarity from foreign politicians,** covered a total of 196 times on all channels. The majority of these statements were covered on "Rustavi 2" (33%, n=64) and "TV First" (27%, n=52).
2. **Statements of solidarity from opposition representatives,** aired 144 times. "TV First" (43%, n=62) and the public broadcaster (17%, n=24) devoted the most time to this indicator.
3. **"Citizens' Solidarity Statements"** were aired 169 times, with 57 times (34%) on "TV First," and "Main Channel" covering 23% (n=38) of these statements.
4. **Statements of solidarity by government representatives** were recorded on all channels, with a total of 86 statements. However, statements expressing solidarity made by the ruling party were mostly covered only by the public broadcaster (37%, n=31) and "Imedi" (41%, n=35).

Conclusion

This study delved into the identification of solidarity journalism indicators within the media during war communications, highlighting their role as a mechanism of support. The research uncovered that these media elements serve as tools for bolstering collective stress resilience, empowering vulnerable groups, and fostering discourse that encourages pro-social conduct. Across the study's timeline, solidarity indicators took center stage in media agendas and framing, being widely and diversely employed across various television channels. In the initial research

phase (February-March), Georgian media exhibited a wide-ranging, comprehensive display of solidarity towards Ukraine. These indicators of solidarity seamlessly integrated into daily broadcast schedules, adapting to different television formats. The media also showcased the alignment of national objectives between Ukraine and Georgia.

Nonetheless, the media's framing of solidarity remained influenced by political polarization and editorial policies. Expressions of gratitude from Ukrainian government officials towards Georgians often came hand in hand with critiques of the Georgian government, mirroring the contrasting viewpoints of pro-government and critical channels.

Regarding the coverage of solidarity actions, official channels placed greater emphasis on actions within Russia, while other television stations presented a more diverse geographical perspective. Noteworthy themes in media discourse encompassed portraying Russia as a mutual adversary and drawing parallels with the 2008 Russia-Georgia conflict. Even as two months elapsed since the commencement of the war, the media's practice of demonstrating solidarity with Ukraine persisted alongside the emergence of new topics on the Georgian media's agenda. The extensive utilization of solidarity features is anticipated to leave a lasting mark on the audience's memory, and the pro-social support frames preserved in archival materials might shape the future news context on this subject. In summary, this study casts illumination on the role of solidarity journalism in buttressing and empowering communities during crises. The findings provide valuable insights into comprehending media responses to international conflicts and humanitarian emergencies. Subsequent research avenues could explore the enduring impacts of this media coverage on collective memory and societal attitudes.

References

Freedom House (2023). *Georgia*. Available at: https://freedomhouse.org/country/geor gia/freedom-world/2023.

Joseph, T. (2014). Mediating war and peace: mass media and international conflict. *India Quarterly*, *70*(3), 225–240.

Kitty, A. (2005). *Don't believe it! How lies become news*. American First Edition. Disinformation Books.

Lotman, J. (2007). *Hirm ja Segadus: Esseid kultuurisemiootikast*. (Fear and confusion: essays in cultural semiotics). Tallinn: Varrak.

Makhortykh, M., Bastian, M. (2022). Personalizing the war: Perspectives for the adoption of news recommendation algorithms in the media coverage of the conflict in Eastern Ukraine. *Media, War & Conflict*, *15*(1), 25–45.

Reporters without Borders (2023). *Georgia*. Available at: https://rsf.org/en/country/geo rgia.

Varma A., (2023) Solidarity reporting on marginalization: a grounded alternative to monitorial reporting's emphasis on officials. *Journalism Practice*.

Ventsel, A., Hansson, S., Madisson, M.-L., Sazonov, V. (2021). Discourse of fear in strategic narratives: the case of Russia's Zapad war games. *Media, War & Conflict*, *14*(1), 21–39.

Communication Apprehension among the Communication Students of Bangladesh

By Md. Motiur Rahman[*] & Farzana Tasnim Pinky[±]

The aim of this study is to assess the communication apprehension (CA) among the communication students of Bangladesh. The data were collected from 283 students from 10 public universities through the survey method. McCroskey's (1982) Personal Report of Communication Apprehension, also known as the PRCA-24 test was adopted for this study. The data were analyzed using both descriptive and inferential statistics of SPSS 23 software. The study explores that the mean communication apprehension score of communication students of Bangladesh is 68.12 which ascertains the medium level of CA of the students. It also says that 12.6% of students have high CA, 64.7% have medium CA and the rest 13.8% have a low level of communication apprehension. Students are more apprehensive in public communication rather than in group, meeting, and interpersonal communication. Male students have less CA than female students. This research also reveals that those students experience more CA who suffer from depression, prefer loneliness, and spend more time on social media. Communication apprehensive students prefer to sit in the back row or alongside in the classroom setting. Also, CA score is decreased when the age of the student is increased. The study also assesses that students involved with co-curricular activities have less CA than the other students. The study recommends that universities should offer more practical courses in communication to overcome communication apprehension.

Keywords: communication, apprehension, communication students, Bangladesh, university students

Introduction

Communication apprehension (CA) is a person's level of fear or anxiety connected with actual or prospective communication with another person or group of people (McCroskey & Michael, 1986). Various levels of CA are present in every human being since the inception of human beings in the world. Though CA is an ancient phenomenon, this concept was recognized academically in the 1970s. James C. McCroskey, the father of communication apprehension, coined the concept of Communication apprehension in 1970 (McCroskey, 2009).

Two persons out of every ten suffer from communication anxiety (Watson & Bossley, 1995). CA can be generated by any of the following four types of communication: interpersonal, group, public, and mass. There are four CA types: trait, context, audience, and situational. Trait anxiety is regarded as a personality

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[*]Lecturer, Department of Journalism and Mass Communication, Northern University of Business and Technology Khulna, Bangladesh.

[±]Assistant Professor, Mass Communication and Journalism Discipline, Khulna University, Bangladesh.

type that indicates an individual's propensity to experience anxiety during communication regardless of the situation, audience, or context. Context anxiety causes communication distress owing to a certain context. Psychologists believe that this is a psychological reaction triggered by a specific situation, but that it does not necessarily affect everyone in the same way. Audience anxiety occurs when a certain person or group of people impedes communication or provokes a negative response. Depending on the individual, anxiety may be triggered by familiar peers or unwanted strangers. Situational anxiety is a person's psychological response to a given scenario that may or may not be related to the person or surroundings (Witt et al., 2006).

Communication apprehension has an impact on many aspects of life, either consciously or unconsciously. Everyone is influenced by CA, and the level of anxiety people experience can have a positive or negative impact on their work performance. All people, to some extent, experience the accompanying feelings of reluctance, apprehension, and anxiety that go along with the dread of speaking in public or with others (Bodie, 2013). A natural discomfort may be experienced by some when asked to speak in front of a large crowd. Others see it as the unease they experience prior to being asked to speak in front of a group or as the unexpected rush of anxiety they get upon attending a gathering. It can also appear in social situations, such as when making an important phone call or going to the boss's office to talk about the yearly appraisal. Certain people experience communication anxiety more than others (Petry, 2016). CA has both an "external impact" on how behavior is shaped and how social connections are formed as well as an "internal impact" on the psyche and emotions of the individual (McCroskey, 1977).

Aims and Objectives

Communication is studied in eleven public universities in Bangladesh. About 2,500 students are offered communication-related courses under the department of Mass Communication and Journalism (MCJ) or Communication and Journalism (CAJ) or Media Studies and Journalism (MSJ). This study measured the communication apprehension level among these students.

Different types of CA are found among human beings. This study assesses all possible CA of communication students. It also measures the CA of interpersonal, group, public, and mass communication of the students particularly. So, the aims and objectives of the study are as follows:

To explore the communication apprehension among the communication students of Bangladesh
To find the CA level of interpersonal, group, meeting, and public communication separately
To investigate into the factors behind CA

Research Question

No study was found focusing on the communication students of Bangladesh. Some important factors relate to CA of the students' age, sex, academic background, academic year, co-curricular activities, spending time on social media, feeling depression etc. But these factors were absent in most of the research. To address these lacks researches the following research questions were developed:

RQ1. Which level of CA do communication students of Bangladesh experience?
RQ2. Which factors are related to communication apprehension?

Literature Review

Several studies were undertaken to determine the prevalence of CA among Bangladeshi students. A recent study released in 2020 titled Oral Communication Apprehension (OCA) among Undergraduate Accounting and Journalism Students in Bangladesh indicated that students in Bangladesh have a moderate degree of OCA, with a mean score of 63.79. Furthermore, it was asserted that even those with good academic credentials frequently demonstrate inadequate oral communication skills (Maliha & Hossain, 2020) According to this study, the association between time and CA fluctuates from year to year. The findings are supported by the fact that the mean Oral Communication Apprehension score of first-year students is greater than that of third-year students (Gardner & Whiting, 2005). As the curve decreases over time, it demonstrates that a university education has a positive influence by providing individuals with ample possibilities to pursue degrees beyond the OCA. They also demonstrated that journalism students have greater communication anxiety than accounting students.

In 1983, a notable study was carried out to identify the CA among pharmacy students (McCroskey, 1983b). It stated that approximately one in five pharmacy students (comparable to the general population) experience significant communication apprehension. There is considerable variation between and within schools. In different schools, the proportion of pupils with high CA ranged from 4 percent to over 30 students. These individuals are prone to become high CA pharmacists who engage in passive or inefficient interactions with patients. Additionally, more than one-third of pharmacy students identify as shy. The percentage fluctuates from 25% to 42% across different schools. Approximately forty percent of these shy people do not view their shyness as a problem, despite the fact that many of them are extremely communication apprehensive. These introverted people are also likely to avoid communication situations frequently. The greater the anxiety a communication environment produces, the less significance a student places on that form of communication. By making the significance of oral communication fit with the individual's beliefs, an attempt appears to be made to rationalize the avoidance of communication.

CA exists among doctorate students as well. In 2018, a study on the CA of doctorate students was undertaken in Malaysia. It states that despite years of training as lecturers or presenters, doctorate candidates are unable to avoid OCA

when talking with the assessment panel. In the study, linguistic challenges, a lack of understanding of the researchers' research during presentations, negative perceptions of the presentation panel, and other factors affected the OCA of international doctoral candidates. The students were unquestionably anxious about the academic presentation, and the aforementioned elements exacerbated their degree of OCA (Amiri & Puteh, 2018).

In Palestine, a 2017 study titled "Oral Communication Apprehension among English Senior Majors at Quds Open University" was conducted (Abu Taha & Abu Rezeq, 2018). At the 0.05 significance level, there was no statistically significant difference between gender and oral communication apprehension among senior English majors at Al-Quds Open University in Palestine (male or female). When communicating in a second language, communication apprehension can vary. According to a study titled "Correlation between communication apprehension and the development of communication skills in engineering students," only nine out of a hundred people demonstrate minimal communication anxiety. 42% of students have moderate communication anxiety, while 49% have severe communication anxiety (Patil & Karekatti, 2012). When communicating in their own language, the Puerto Rican pupils were substantially less anxious than when speaking English (McCroskey, 1983a).

Communication apprehension can vary when utilizing a second language. Only nine out of one hundred students, according to a study titled "Correlation between level of communication apprehension and development of communication skills in engineering students," exhibit minimal communication apprehension. 42% of students report moderate communication apprehension, while 49% have significant communication apprehension (Patil & Karekatti, 2012). The Puerto Rican students were far less apprehensive when conversing in their native language than when communicating in English (McCroskey, 1983a).

"Communication Apprehension and Level of Anxiety in the Medical Students of Rafsanjan University of Medical Sciences" is the title of a study on communication anxiety among medical students at a major medical university in southeast Iran. This study of 340 paramedical and medical students indicated that students feel anxious and reluctant to speak up in class (Hashemi & Hadavi, 2020).

In his study, "The Impact of Communication Apprehension on College Student Retention and Success," McCroskey examined the relationship between communication apprehension (CA) and academic outcomes. Unlike the previous study, this one examines the relationship between CA and academic success (McCroske & Payne, 1989). They observed that individuals with high CA had lower cumulative grade point averages, were more likely to drop out, and lacked the requisite coping strategies to adapt from the simple social contexts of their childhood homes to the usually complicated social contexts of college campuses. High CA students are distant from their professors and typically attribute their social or academic troubles to them (Kelley, 1973). Individuals with high levels of CA fear communicating with others and experience discomfort while considering doing so (McCroskey et al., 1985). High CA individuals struggle to engage in participation, attachment, and courteous behaviors with people they do not know well, both within and outside of the class (Martin, 2006).

Female students have more communication apprehension than male students do, per a study titled "Communication Apprehension and Its Relationship to Gender and College Year" carried out in the United States (Frantz et al., 2005). It shows that whereas men's mean scores were 62.62 and their standard deviations were 16.06, women's mean scores were 69.12 and theirs was 13.49. Further American research has found that women express a higher level of communication fear than males do (Aly and Islam, 2005). However, contradicting findings from another study were found. They found that men majoring in accounting have a greater CA degree than women majoring in accounting (Borzi & Mills, 2001).

The connection between time and communication anxiety has been the topic of numerous research. A 2005 study revealed no correlation between communication anxiety and educational advancement. Moreover, Frantz et al. (2005) supported this assertion (Winiecki & Ayres, 1999). It was discovered that a person's length of service with a corporation had no influence on their CA level. Professional decision-making is associated with communication anxiety. According to a 2009 study, persons with moderate or high levels of communication anxiety had more difficulty with decision-making, commitment anxiety, and external conflicts. The connection between time and communication anxiety has been the topic of numerous research. A 2005 study revealed no correlation between communication anxiety and educational advancement. Moreover, Frantz et al. (2005) supported this assertion (Winiecki & Ayres, 1999). It was discovered that a person's length of service with a corporation had no influence on their CA level. Professional decision-making is associated with communication anxiety. According to a 2009 study, people with moderate or high levels of communication anxiety had more difficulty with decision-making, commitment anxiety, and external conflicts (Meyer-Griffith et al., 2009).

CA has a significant impact on the profession in many ways. Those who are highly anxious find it difficult to land a good job. People with high communication apprehension typically work in lower-level positions and make less money, according to Winiecki & Ayres (1999). An employee's job satisfaction fell as their communication anxiety rose. An employee's situational anxiety rose along with their level of communication anxiety (Byron, 2005). Job happiness and productivity are closely related. Consequently, we can say that CA can affect a person's performance at work.

There is a strong correlation between social media usage and CA. Several studies have been undertaken in this field. Recent research from 2022 indicates that those with high levels of communication anxiety are more likely to be social media addicts than those with lesser levels of communication anxiety (Awobamise, 2022). According to another study, people with some degree of communication apprehension prefer to communicate through a medium rather than face-to-face (Armstrong and Rubin, 1989). People with high degrees of social anxiety commonly utilize social media (McCord & Levinson 2014).

Similar to other personal issues, CA can be resolved in several ways. Different academic training and public speaking courses might reduce communication apprehension. According to a 2009 study titled "Effects of Instruction on Communication Apprehension and Communication Competence", classroom

instruction can alter students' levels of communication competence (CC) and communication apprehension (CA). From the course's beginning to its conclusion, CC increased while CA fell. In addition, CA with strangers increased whereas CA in groups declined between enrollment and exit (Rubin & Jordan, 1997). We were unable to locate a specific study on communication apprehension among communication students. In this research, we investigated how CA works on people who have been taught for a long time about public speaking, critical thinking, problem solving, and conflict resolution.

Research Methodology

This research has been conducted with both qualitative and quantitative approach. However, quantitative data with qualitative interpretation has been presented in the table. As the aim of this research is to find out the level of communication apprehension of the students, the researcher conducts this research analyzing the data which are collected from the students. So, survey method has been used in this research. The study has been conducted on the communication students of Bangladesh. A survey-based questionnaire has been used to collect the data. The questionnaire was sent to about 1000 students in Google form through digital media. A total of 283 students from different universities filled up the Google form.

Sampling: Sampling is the process of selecting suitable samples for collecting data. Sampling process selects for collecting data quickly and easily for research activities. Convenient sampling method has been used to collect samples from the population. From every university a reasonable number of students participated in the study. With a 95% level of confidence, 283 out of a total of 2420 students were chosen for the study.

Population: Students enrolled in communication-related departments at all Bangladeshi public universities make up the research population for this study. Those departments are Mass Communication and Journalism, Communication and Journalism, Journalism and Media studies.

Instrumentation: The Personal Report of Communication Apprehension, also known as the PRCA-24 exam, is the most common and reliable way for establishing a person's CA level (Payton & Scott, 2013). It is the worldwide recognized method of measuring communication apprehension. Great communication specialist and father of communication apprehension Dr. James C. McCroskey developed this method. This PRCA 24 can discover the CA of group discussion, interpersonal communication, meeting communication and the CA of public speaking separately. The questionnaire was expanded to inquire about the gender, age, academic year, academic background, spending time on social media, involvement with co-curricular activities etc. of each respondent.

Scoring: A total CA score and four CA sub-score are calculated using the PRCA-24. The following are the scoring criteria: Group discussion: 18 - (scores for items 2, 4, & 6) + (scores for items 1, 3, & 5). Meetings: 18 - (scores for items 8, 9, & 12) + (scores for items 7, 10, & 11). Interpersonal: 18 - (scores for items

14, 16, & 17) + (scores for items 13, 15, & 18). Public Speaking: 18 - (scores for items 19, 21, & 23) + (scores for items 20, 22, & 24). All four sub scores can be put together to generate a total score. Scores may range from 24 to 120. People with very low CA have scores between 24 and 50. People with an average, medium, or moderate CA have a score ranging from 51 to 80. Individuals with high levels of CA scored more than 81.

Analysis

Overall Score of Communication Apprehension

Table 1. Overall Score of Communication Apprehension

N	Minimum	Maximum	Mean	High CA	Medium CA	Low CA
283	27	104	68.12	21%	65%	14%

Table 1 represents the main goal of this study which is to uncover the CA score of communication students of Bangladesh. Table 1 shows that the mean score of communication apprehension of the respondents is 68.12. It denotes the medium/ average/ moderate level of communication apprehension. Individuals with a score of 24 to 50 have a very low CA. The CA is average, medium, or moderate for people with scores between 51 and 80, but high for those with values over 81. Out of 120 minimum score of CA is 27 and maximum is 104. It also expresses that out of 283 respondents 61 (21%) have a high level of CA and 39 (14%) have low level of CA. In contrast, the majority of the 183 responders (65%) have a medium level of CA.

Score of Interpersonal, Group, Meeting and Public Communication Apprehension

Table 2. Score of Interpersonal, Group, Meeting and Public Communication Apprehension

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Interpersonal CA	283	6	29	16.96	4.189
Group CA	283	6	29	15.06	4.273
Meeting CA	283	6	30	17.25	4.872
Public CA	283	6	29	18.85	4.392

Overall CA is divided into four distinctive sub-categories which are interpersonal, group, meeting, and Public CA. Table 2 expresses the CA score of the respondents according to these four subcategories. It says that the mean score of interpersonal CA is 16.96 and the minimum and maximum score is 6 and 29 respectively with a standard deviation of 4.189. On the other hand, the mean score of group CA is 15.06 which is less than interpersonal CA. The minimum and maximum score is 6 and 29 respectively with a standard deviation of 4.273. Again, the mean score of meeting CA is 17.25 which is higher than interpersonal and

group CA. The minimum and maximum score is 6 and 30 respectively with a standard deviation of 4.872. However, among the four CA subcategories, public communication apprehension has the highest score. This score is 18.85 and the minimum and maximum score is 6 and 29 respectively with a standard deviation of 4.392.

CA Score of the Respondents According to Academic Year

Table 3. CA Score of the Respondents According to Academic Year

Student Year	Mean	N	Std. Deviation	High	Medium	Low	Total
				Level of CA
First year	73.15	73	13.226	23(31.50%)	46(63.01%)	4(5.48%)	73
Second year	72.10	31	12.924	6(19.35%)	22(70.97%)	3 (9.68%)	31
Third year	68.35	79	15.799	16(20.25%)	53(67.09%)	10 (12.66%)	79
Fourth year	63.04	52	17.102	8(15.38%)	29(55.77%)	15(28.85%)	52
Masters	63.00	48	15.833	8(16.67%)	30(62.50%)	10(20.83 %)	48
Total	68.12	283	15.610	61(21.55%)	183(64.66%)	39(13.78%)	283

Table 3 shows the academic year of the students and its relationship to communication apprehension. It says that there is a close connection between the academic year and the mean CA score of the respondents. The mean CA of first-year students is 73.15 and the second-year students' is 72.10. On the other hand, 68.35 is the mean CA for third-year students. Again, 63.04 is the mean CA of fourth-year students. Finally, the mean CA of master's students is 63.00. Here we can say that the CA score is decreasing gradually based on the year of the students. If we compare the high and low CA scores of first-year and fourth-year students, we will get a significant difference among them. The percentage of High CA among first-year students is 31.50. On the other hand, this percentage of fourth-year students is only 15.38. The ratio of high CA among first year students is double that of fourth year students. Again 5.84% students of first year students have low CA scores but the percentage of low CA scores of fourth year students is 28.85. Here we can see the ratio of low CA among fourth year students is five times more than that of first year students. Students of communication complete different types of communication-related courses in their university life. The improvement of CA can be the result of these courses.

CA Score of the Respondents According to Sexual Identification

Figure 1. CA Score of the Respondents According to Sexual Identification
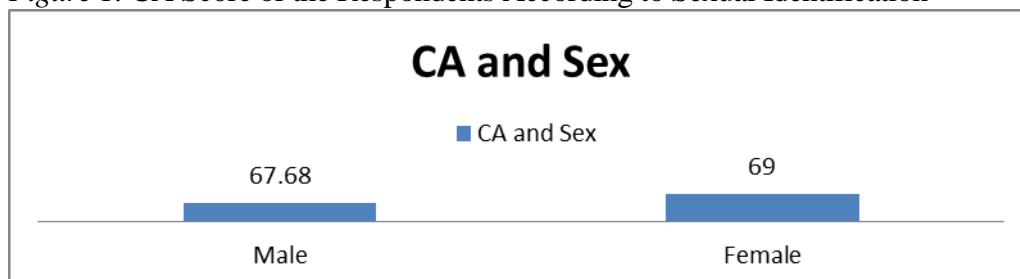
Figure 1 shows the CA state of male and female separately. Here the mean of male students is 67.68 and the mean CA of female students is 69.00. There is a difference between the mean CA of males and females. This figure portrays that female students have more CA than male students. Again, among male students 21.16% male students have high CA and 22.34% female students have high CA. The ration of low CA among male and female students is 14.29% and 12.77. Medium level CA of female students is also higher than that of male. This figure proves that female students have more CA than male students.

CA Score of the Respondents According to Level of Suffering Depression and Preferring Loneliness

Figure 2. CA Score of the Respondents According to Level of Suffering Depression and Preferring Loneliness
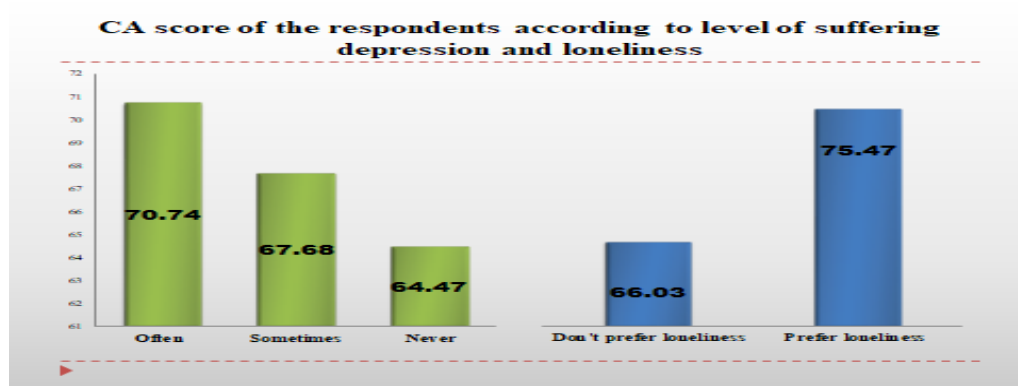

Figure 2 shows the level of suffering depression of the respondents and its relationship to communication apprehension. Among 283 respondents 26.15% respondents suffer depression most of the time, 62.54% suffer it sometimes and 11.31% respondents don't suffer depression. There are differences in suffering CA among these three categories of respondents. The people who suffer from depression most of the time have a 70.74 mean CA score. Again, 67.68 is the mean CA score of those respondents who suffer from depression sometimes But for the respondents who don't suffer from depression mean CA score is 64.47. Here is a positive relationship between depression and communication apprehension. So, we can say more depressed people have more CA. It also showed that the people who prefer to be alone most of the time have more CA (mean 75.47) than the people who don't prefer to be alone. It means that loneliness has an effect on people's communication ability. Difference of mean CA between these two categories of people is 9.44.

Co-Curricular Activities, Childhood Talkative State and Communication Apprehension

Table 4. Co-Curricular Activities, Childhood Talkative State and Communication Apprehension

Do you have active involvement with co-curricular activities?	Mean CA	Talkativeness in childhood	Mean CA
I have active involvement with co-curricular activities now.	63.34	Talkative in childhood	59.68
I had active involvement with co-curricular activities.	68.20	Non-talkative in childhood	69.84
I didn't have any active involvement with co-curricular activities.	74.88		

Table 4 shows that mean CA score of people who have active involvement with co-curricular activities now is 63.34 and the people who had active involvement with co-curricular activities in the past is 68.20 but the score of respondents who did not have any involvement with co-curricular activities at past is 74.88. This huge difference portrays the significant influence of co-curriculum activities to reduce the communication apprehension of the people. On the other hand, the mean CA of childhood talkative respondents is 59.68, and 69.84 is the mean CA of those respondents who were not talking and were outgoing in childhood. It means talkative children have less CA than non-talkative students.

CA Score of the Respondents According to the Spending Time on Social Media and Classroom Sitting Position

Figure 3. CA Score of the Respondents According to the Spending Time on Social Media and Classroom Sitting Position
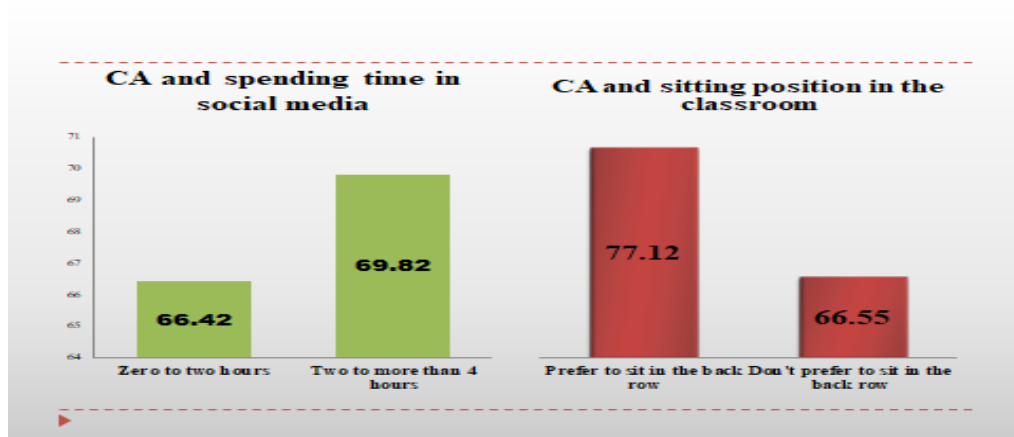

Figure 3 shows the amount of time spent on social media of the respondents and its relationship to communication apprehension. It shows that 23.67% of the respondents spend zero to two hours on social media per day and their mean CA score is 66.42. On the other hand, 76.33% of respondents spend two to more than four hours per day on the same platform but their mean CA score is 69.82%. Here

it is clear that less time spent on social media means less CA. Among 283 students 210(74.20%) don't prefer to sit in the back row or alongside of the room and their mean CA score 66.55. On the other side, 17 students prefer to sit in the back row or alongside the room and their mean CA score is 77.12 with a standard deviation of 18.891. The difference in CA scores between these two categories of students is 10.57. So, there is a significant difference between them. On the basis of this information, we can say that the students who prefer to sit in the back row or alongside the room have more CA than the students who don't prefer to sit in the back row.

CA Score of the Respondents According to the Age

Figure 4. CA Score of the Respondents According to Age
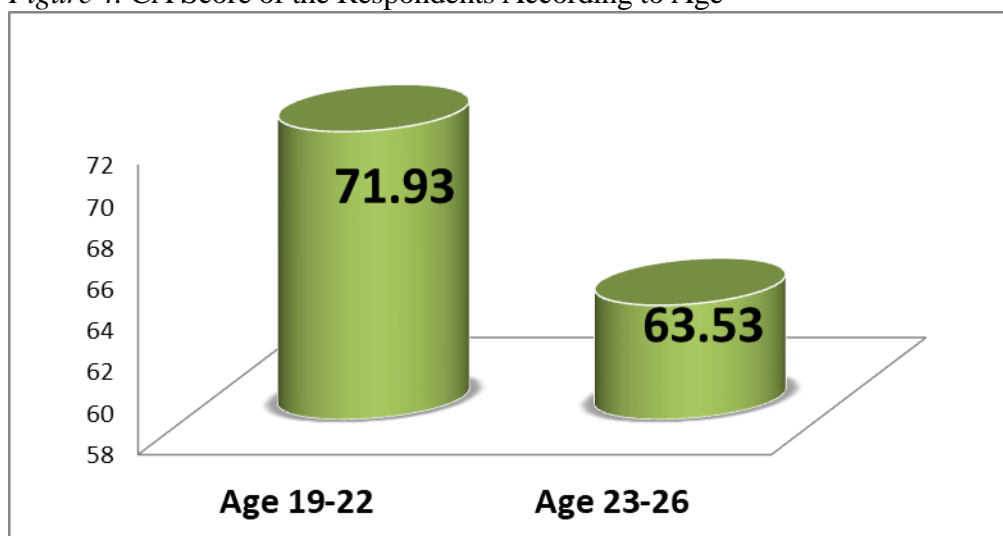
Age is an important factor in measuring communication apprehension. The age range of 170 respondents is 19-22. There are also 113 students whose age is 23 to 26. Figure 4 expresses that the mean CA of the first 170 students is 71.93. On the other hand, the mean CA of second113 students is 63.53. Here we can see the difference in CA between these two groups of people. On the basis of this table, we can say that senior students have less CA than junior students.

Discussion

This study reveals that the mean communication apprehension among the communication students of Bangladesh is 68.12. It means CA is medium. Tahir et al. (2017) found similar results analyzing 23 papers. They reported general PRCA 24 score is from 55 to 83. The score of this study is also between these two numbers. This score is much lower than that of Nigerian Communication students. Tahir et al. (2017) said that the mean CA of Nigerian communication students is 81.85 while Maliha and Hossain (2020) found the mean CA of Bangladeshi communication students is 63.78. Alex (2015) said that the mean CA of Malaysian

accounts students is 74.94 which is more than the results of this study. Again Lias (2013) found the score of Asian accounts students is 73.9 Patil & Karekatti (2012) said the CA of Indian engineering students is 69.32. However, students from Western nations have a lower CA than those from non-Western nations. It reveals the general PRCA 24 score of United States students is 59.34. Finland Communication students' CA is 57.36.

In addition, the study found that 21% of communication students have severe CA. High apprehensive persons typically struggle to overcome their anxiety on their own. Oftentimes, when speaking, one's efficiency on both a personal and professional level can be impaired by apprehension. 65% of students exhibit moderate CA. The extent of preparation, circumstances, and communication style have the greatest impact on students with moderate apprehension. Typically, fear is not a deciding factor. Only 14% of communication students had low levels of CA. Students at this level may demonstrate either a high level of self-control or a lack thereof. It suggests that one is free to speak up at any time, regardless of the consequences. The mean score for interpersonal CA is 16.96, the mean score for group CA is 15.06, the mean score for meetings is 17.25, and the mean score for public speaking is 18.85. These results support Tahir et al. (2017) analysis, which provides a summary of 23 investigations. According to the statement, the range for interpersonal communication is between 11.6 and 18.2, the range for public speaking is between 17.77 and 20.1, the range for group discussions is between 12.67 and 21.6, and the range for meetings is between 12.42 and 21.44.

The mean CA of first, second, third, fourth, and masters' students are 73.15, 72.10, 68.35, 63.04 and 63.00 respectively. So, we can say that CA score can be varied on the basis of the academic year of the students. It supports the study of Maliha & Hossain (2020) which also claimed mean oral communication apprehension score of 1st year students is higher than that of 3rd year students. A communication student is bound to complete different types of courses during his/ her graduation life e.g. concept of communication, interpersonal and group communication, public communication, speech communication, theories of communication, etc. Quinn & Goody (2019) argue that students who are worried about public speaking can benefit from simple courses. This study revealed little difference in the mean CA of men and women. The CA scores of men are 67.68 and those of women are 69.00. In this circumstance, female students are more uncomfortable than male students. Donovan (2004) found the mean CA score of females was 69.12, which was higher than that of the males. On the other hand, the mean score for males was 62.62 (Donovan, 2004). McCroskey (1982) also said men are believed to have lower CA levels than women. But Lin (2003) discovered the opposite to be true, contrary to the commonly held belief that males are less anxious than females. 70.74 is the average CA score of people who experience depression most of the time. Once again, the mean CA score of those who experience depression occasionally is 67.68. In contrast, the average CA score for those without depression is 64.47. A beneficial relationship exists between depression and communication anxiety. Consequently, more depressed people have higher CA. Those who like to be alone most of the time had higher levels of CA (mean 75.47) compared to those who do not. It means that loneliness affects a

person's ability to communicate. The mean CA score for respondents now engaged in co-curricular activities is 63.34, while the mean CA score for respondents who were actively engaged in co-curricular activities in the past is 68.20. The mean CA score for respondents who were not actively participating in co-curricular activities in the past is 74.88. It means that engagement in co-curricular activities contributes to a lower CA score and helps students overcome CA.

This study also discovered that 23.67% of the respondents spend zero to two hours on social media per day and their mean CA score is 66.42. On the other hand, 76.33% respondents spend two to more than four hours per day on the same platform, but their mean CA score is 69.82%. Here it is clear that less time spent on social media means less CA. Some studies support this statement. According to Awobamise (2022), persons who have high levels of communication apprehension are more likely than people who have lower levels to be addicted to social media. Whereas McCord & Levinson (2014) stated that people who have high levels of social anxiety prefer to use social media frequently. Some responders like to sit in the back row or along the side of the room, while others do not. The findings of this study revealed a CA difference between these two groups of students. The first category students' mean CA is 77.12, while second category students' is 66.55. Between these two groups of pupils, there is a 10.57 point difference in CA scores. Therefore, there is a big difference between them. Based on this data, we may conclude that students who like to sit in the back row or adjacent to the room have a higher CA than students who don't. The findings of this study are supported by Love (2013). According to him, kids who are shy or anxious around communication choose to sit towards the back or on the edges of the room, so they won't stand out. The people who raise their hands to answer questions in class and even speak up in small groups exhibit the lowest level of communication apprehension. The people who sit on the periphery of the classroom, trying to avoid eye contact with their teacher so they won't be asked to join in class discussion, exhibit the highest level of communication apprehension. Childhood talking patterns and communication anxiety are closely related. The mean CA of respondents who were talkative as children is 59.68. The mean CA of respondents who were talkative and outgoing as children, on the other hand, is 69.84. Children who talk a lot have lower CA than those who don't talk a lot.

This study indicates that there is a positive relationship between age and communication apprehension. This study found CA can be different in the variation of age. The mean CA of respondents aged between 19 to 22 is 71.93 and age between 23 to 26 is 63.53. Here aged respondents are found less communication apprehensive than less aged students. It supports the study of Watson (1989).

Conclusion

The purpose of this study was to explore the communication apprehension of the communication students of Bangladesh. Finally, the study discovered the CA score and level of the communication apprehension of students of Bangladesh. The mean CA score is 68.12 and its level is medium or moderate. This score is

more than Western and European countries but less than some African and Asian countries. The mean CA score of interpersonal, group, meeting and public communication in this study is also at a moderate level. Among these four subcategories, public communication CA is high. There is a slight difference between male and female students. Female students are more apprehensive than male students.

Depression and loneliness have a negative impact on communication competence. The students who suffer from depression and loneliness most of the time experience more communication apprehension than others. Spending much time on social media is a new concern of communication apprehension. Because they are more communication apprehensive who spend more time on social media than those students who spend less time on social media. Generally, apprehensive students prefer to sit in the back row or alongside the room so that they can avoid face-to-face intimate communication with the teachers. The age of the respondent also has a close connection to CA. Senior students have less CA than junior students. The student who was talkative during childhood has less CA than other children. Some factors can contribute to reducing CA in students. Being involved actively with co-curricular activities is one of them. The more involvement with co-curricular activities can ensure less communication apprehension of the students. Offering more communication-related courses along with its practical session can contribute to overcoming all sorts of communication apprehension of the students. CA of master's or fourth year student is less than that of first year or second year students. Communication-related courses have contributed to this success. Finally the findings from this research will contribute to future studies and we hope conducting more research and adopting proper measures on the communication students a communication competent youth will be established.

References

Abu Taha, M. A., Abu Rezeq, K. A. (2018). Oral communication apprehension among English senior majors at Al-Quds Open University in Palestine. *International Journal of Reseach in English Education, 3*(1), 44–58.

Alex, F. (2015). *Communication apprehension and temperament: a communibiological perspective in account education*. UTAR.

Aly, I., Islam, M. (2005). Factors affecting oral communication apprehension among business students: an empirical study. *The Journal of American Academy of Business, 2*, 98–103.

Amiri, F., Puteh, M. (2018). Oral communication apprehension among international doctoral students. *Canadian Center of Science and Education, 11*(2).

Armstrong, C. B., Rubin, A. M. (1989). Talk radio as interpersonal communication. *Journal of Communication, 39*(2), 84–94.

Awobamise, A. (2022). Social communication apprehension, self-esteem and facebook addiction among university students in Uganda. *Contemporary Educational Technology*.

Bodie, G. D. (2013). An analysis of the correspondence between imagined interaction attributes and functions. *Human Communication Research, 39*(2), 157–183.

Borzi, M. G., Mills, T. H. (2001). Communication apprehension in upper-level accounting students: an assessment of skill development. *Journal of Education for Business, 76(4)*, 193–199.

Byron, A. L. (2005). *Communication apprehension in the workplace and its effects on employee job satisfaction.* Master's Thesis. Texas Tech University.

Donovan, M. P. (2004). Age and sex differences in willingness to communicate, communication apprehension, and self-perceived competence. *Communication Research Reports, 21*(4), 420–427.

Frantz, J., Marlow, A., Wathen, J. (2005). Communication apprehension and its relationship to gender and college year. *Journal of Undergraduate Research at Minnesota State University, 5*, 7.

Gardner, C. M., Whiting, R. (2005). Oral and written communication apprehension in accounting students: curriculum impacts and impacts on academic performance. *Accounting Education, 14*(3), 313–336.

Hashemi, Z. S., Hadavi, M. (2020). Communication apprehension and level of anxiety in the medical students of Rafsanjan University of Medical Sciences. *Journal of Education and Health Promotion*, *9*, 350.

Kelley, H. (1973). The processes of causal attribution. *American Psychologist, 28*(2), 107.

Lias, R. M. (2013). Communication apprehension (CA): a case of accounting students.

Lin, R. A. (2003). Sex differences in intercultural communication apprehension, ethnocentrism, and intercultural willingness to communicate. *Psychological Reports, 92*(1), 195–200.

Love, J. A. (2013). *Individual interdisciplinary program communication apprehension in the classroom: a study of nontraditional graduate students at Ohio University*. Ohio, USA.

Maliha, T., Hossain, M. S. (2020). Oral Communication Apprehension (OCA) among undergraduate accounting and journalism students in Bangladesh. *International Journal of Linguistics, Literature and Translation (IJLLT), 1*(3).

Martin, M. S. (2006). Students' communication traits and their out-of-class communication with their instructors. *Communication Research Reports, 23*(4).

McCord, B. R., Levinson, C. A. (2014). Facebook: social uses and anxiety. *Computer in Human Behaviour, 34*, 23–27.

McCroskey, J. C. (1977). Consequence of communication apprehension. *Communication Education, 26*(1), 27–33.

McCroskey, J. C. (1982). Biological sex and communication apprehension. *Communication Quarterly, 30*(2), 129–133.

McCroskey, J. C. (1983a). *Don't speak to me in English: communication apprehension in Puerto Rico.* Puerto Rico.

McCroskey, J. C. (1983b). *A study of communication apprehension in pharmacy students in 51 colleges and universities*. Dallas, Tx: Bethesda, Md: American Association of Colleges of Pharmacy.

McCroskey, J. C. (2009). Communication apprehension: what have we learn in the last four decades. *Human Communication, 12*.

McCroskey, J. C., Michael, J. (1986). Oral communication apprehension. *Shyness*, 279–293.

McCroskey, J. C., Payne, S. (1989). The impact of communication apprehension on college student retention and success. *Communication Quarterly, 37*(2), 100–107.

McCroskey, J. C., et al. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly, 33*(3), 165–173.

Meyer-Griffith, K., Reardon, R. C., Hartley, S. L. (2009). An examination of the relationship between career thoughts and communication apprehension. *Career Development Quarterly, 58*(02), 171–180.

Patil, M., Karekatti, T. (2012). Correlation between level of communication apprehension and development of communication skills in engineering students. *English for Specific Purposes World, 36*(12).

Payton, K. E., Scott, J. A. (2013). Communication apprehension among homeschooled college freshmen. *FOCUS on Colleges, Universities & Schools, 7*(1), 1–10.

Petry, A. C. (2016). Communication apprehension affects performance. *Masters Essays, 49*.

Quinn, S., Goody, A. (2019). An evaluation of a course aimed at reducing public speaking anxiety among university students. *International Journal of Teaching and Learning in Higher Education*, *31*(3), 503–511.

Rubin, R. M., Jordan, F. (1997). Effects of instruction on communication apprehension and communication competence. *Communication Education, 46*(2), 104–114.

Tahir, H., Khor, J., Mozaka, G. M., Kayode, B. K., Khan, T. M. (2017). Prevalence of communication apprehension among college and university students and its association with demographic factors: a systematic review and meta-analysis. *Archives of Pharmacy Practice*, *8*(4), 87–104.

Watson, M. E. (1989). Comparison of communication apprehension across cultures: American and Swedish children. *Communication Quarterly, 37*(1), 67–76.

Watson, A. K., Bossley, J. R. (1995). Taking the sweat out of communication anxiety. *Personnel Journal, 74*(4), 111–117.

Winiecki, K. L., Ayres, J. (1999). Communication apprehension and receiver apprehension in the workplace. *Communication Quarterly, 47*(4A), 430–477.

Witt, P. L., Brown, K. C., Roberts, J. B., Weisel, J., Sawyer, C. R., Behnke, R. R. (2006). Somatic anxiety patterns before, during, and after giving a public speech. *Southern Communication Journal, 71*(1), 87–100.