Shifting the Blame: Storm and Wildfire Dramatic Images in American News Media

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Abstract

Some media frames might be likely to seek to evoke a certain sentiment, and that natural disaster coverage by the media focuses on the current impact of disasters. In their coverage, American news media use polar sentiment words to create bleeding images of natural disasters, potentially counter-productive to the wisdom of dealing with the natural disaster. Identifying the sentiment words that lead to a misperception of natural disasters can help journalists adopt the wisdom that natural disasters are not a human enemy. The corpus-assisted discourse studies (CADS) reported in this article investigates the American media's issues for dramatic reporting and the polar sentiment words utilized in the framing. The corpus is built from 100 news articles reporting wildfires and storms by ten major online American news media published from January 1, 2018, through December 31, 2020. It uses *AntConc* to generate word-list and word-link from which it identifies the dominant issues. Subsequently, it compares the *AntConc* word-list with *A List of Sentiment Words* to reveal the tones and dramatic imaging. The findings show that the dominant issues in storm reporting are description, impact, and prediction, while wildfire reporting are cause, impact, action, and prediction. The negative polar words produce dramatic images of storm as a violent beast and wildfire as a vengeful invader. Such description is provocative to blaming natural disasters as a cause of human suffering rather than improving our behaviors to reduce the suffering. Thus, it is counter-productive to acquiring wisdom for dealing with natural disasters.

Keywords:

Introduction

From a resilience perspective, media could play a key role in creating a narrative about the disaster for the community (Houston et al., 2012). However, the media's frame in the coverage may not always be ideal for civic learning and future policy decision-making. For example, with a frame "human enemy" vs. "human innocence" in disaster reporting, the media may misrepresent that humans are always innocent victims of natural disasters, while human behaviors have contributed to the aggravated tragedy.

Due to its climate and weather conditions, the USA suffers weather and climate disaster events almost annually, including winter storms, hurricanes, tornadoes, and wildfires. From 1980 through 2020, the US has sustained 285 weather and climate disasters where the overall damage costs reached or exceeded $1 billion (Smith, 2021). Not every disaster, however, receives equal attention from the media. The media will give considerable attention to the one having media visibility based on its severity scale: the more extensive the human loss, the greater the likelihood that the media

will cover it (Pantti, 2019, p. 2). It is in line with American journalism's adage, "If it bleeds, it leads" (Cockburn, 2011).

Besides its gravity, a disaster in America affecting the American people will likely make the news. Pantti (2019, p. 2) asserts that disaster reporting is "heavily influenced by geopolitics that affects both which events make the news and how stories are framed or domesticated". According to Todd Gitlin, framing in news reporting is unavoidable as the journalist uses it to interpret, organize, and understand large amounts of information (as quoted by Houston et al., 2012: 608). Framing is even more powerful than the event to report (Rathje, 2017). Despite its importance, media framing has posed challenges to researchers because of the inherent complexity and vagueness of the concept (Kwak, et al., 2020).

Major newspapers such as CNN, The New York Times, The Washington Post, and Fox News are keen to cover weather and climate disasters due to their high severity scale. They use verbal images (words) and nonverbal images (photograph) to highlight disaster bloodiness to produce emotive reporting. Sentiment words may be the News Media's choice to produce emotive reporting, such as *wicked* and *deadly* in The Washington Post headline: "Mapping America's wicked weather and deadly disaster." (The Washington Post, 2019). These negative sentiment adjectives help the media create an image of the disaster as a cold-blooded killer. With this, the headline utilizes a conceptual metaphor DISASTER IS A KILLER (see Kövecses, 2010).

The relationship between framing in disaster reporting and the wisdom for dealing with a natural disaster is still under-researched from a sociolinguistic perspective. To deal better with natural disasters, society needs the awareness that we cannot prevent natural disasters, but we can reduce the impact with appropriate behaviors. From a sociolinguistic perspective, the natural disaster reporting by

the media can help people acquire wisdom, e.g., through words of encouragement and critical evaluation of human (victims') behavior. Therefore, journalists must be more sensitive to framing, which can bring negative implications to the media's 'education' role. They should avoid negative sentiment words potentially counter-productive to the wisdom of dealing with natural disasters.

This article addresses two questions: which disaster-related issues produce emotive reporting, and how the media use sentiment words to create dramatic images of storm and wildfire. The findings will discuss how disaster news reporting can be potentially counter-productive to the wisdom of dealing with natural disasters.

Review of Literature

Disaster news reporting by the media generally focuses on the impacts of the disaster (see Houston, et al., 2012; Hoon, et al., 2015; Pantti, 2019; Kwak, et al., 2020; de Brito et al., 2020). Framing, which is particularly important for the media to organize the information, helps the readers understand the reported events. Research on media framing has been extensively conducted (e.g. Joye, 2010, 2015; Cissel, 2012; Houston, et al, 2012, Grant, et al., 2015; Kwak, et al, 2020; Albrecht, 2021; Parida, et al., 2021) including its relation with sentiment polarity lexicon (e.g. Kwak, et al, 2020; (Imperial, et al., 2018). However, using the sentiment polarity lexicon in disaster news reporting is still under-researched.

Disasters are classified into natural events such as earthquakes, volcanic eruptions and hurricanes, and situations sparked by human actions, such as oil spills, radiation leaks, and chemical accidents (Earth Journalism Networks, 2016). Charles Fritz, of the earliest scholars of disaster, states, "A disaster is an event concentrated in time and space, in which a society or one of its subdivisions undergoes physical harm and social disruption, such that

all or some essential functions of the society or subdivisions are impaired" (quoted by Tomonto, 2019, p.9).

Disaster coverage can easily turn into emotional reporting. (Pantti, 2019, p. 4), meaning that a substantial amount of media coverage is devoted to the emotions of those who have suffered or otherwise been affected by the disaster. Four main emotion discourses characterize high profile disaster reporting, appearing in sequential order: a discourse of horror (at the opening), a discourse of grief, a discourse of compassion, and finally, a discourse of anger. (Joye, 2015) reports that Western news media can attribute a local sense of relevance to global suffering by focusing on domestication's journalistic practice. Unfortunately, disaster reports may create 'disaster myths' or 'disaster fictions' that make an inaccurate perception of disaster (Illner & Holm (2016, p. 55) .

A specific linguistic style (e.g., sentiment) in media framing attracts Kwak, et al. (2020). Their research findings reveal that some media frames might be likely to seek to evoke a certain sentiment intuitively. For example, news articles with the crime and punishment frame may be typically written negatively. Sentiment words used in social media to express thought, opinion, and emotion about the disaster are studied (Imperial, et al., 2018). Positive polar words are used to express support, love, and words of courage to the victims; negative polar words are to state sadness and despair for the loss of lives and hate for corrupt officials; while local news stations express the neutral polar words, announcements of relief operations, donation drives, and observations by citizens. The top 15 frequently occurring words for each polarity and their frequency were identified. Included in the list of words were 'affected', 'good', 'safe' for positive class, 'missing', 'affected', 'strongest' for neutral class, and 'heartbreaking', 'affected', for the negative class. However, the research does not evaluate the effect of polar words on the perception of the disaster.

Previous researchers conduct the study on disaster reporting by applying various methods. (Joye, 2010) investigates the news representation of the 2003 global SARS outbreak using Fairclough's CDA approach and Chouliaraki's theory on the mediation of suffering. (Kuttschreuter et al., 2011) apply content analysis on the study of framing and tone-of-voice of disaster media coverage in order to describe the developments in the media coverage of a disaster from a media amplification perspective. Cissel (2012) uses comparative content analysis, while Horsley (2016) studies media coverage and framing of disasters while using the lens of the crisis-adaptive public information (CAPI) model to offer implications for public information personnel who must communicate with stakeholders.

From the existing literature, news media can report anything related to a disaster under coverage, but only some aspects are selected depending on the chosen frame. In addition, the News media need to evoke a particular sentiment by both verbal and nonverbal images. Despite their important role in disseminating accurate information, the media may also lead the readers to misperception toward the disaster. Therefore, it is necessary to explore how news imagery depicts disasters. This article examines the dramatic images in the reporting of natural disasters that are potentially counter-productive to the wisdom in dealing with natural disasters. The focus is on the issues that make the news, and the use of sentiment words for the dramatic imaging. Unlike Cissel (2012), who compares mainstream and alternative news coverage, this article explores how major online American news media report storms and wildfires happening in the USA. This study applies Corpus-assisted discourse studies (CADS).

Method

The research reported here is a Corpus-assisted discourse studies (CADS), which aims to reveal the implied (non-obvious) meaning in texts. "Much of what carries meaning in texts is not open to direct observation" (Partington, A., Duguid, A., & Taylor, 2013, p.11). CADS would include any study that aims to bring together corpus linguistics and discourse analysis. We developed the corpora by collecting reports on storms and wildfires in the USA from ten major American online newspapers: ABC News, Fox News, Huffington Post, Newsweek, Reuters, The New York Times, The Washington Post, US News, USA Today, and VOA News. The publication period is January 1, 2018, through December 31, 2020. We used "storm" and "wildfires" as keywords to find the articles and collected 100 articles. The online search resulted in two corpora of 29,266 words and 29.582 words, respectively. The following table describes the distribution of the corpora (Table 1).

We used AntConc 3.5.8 to find the most frequently appeared words. We inserted the stoplist on the word list preference to avoid functional or grammatical words. After we found the most frequent words, we checked their concordance to see the context to draw the corpus' word link. The subsequent analysis used this word-link to identify the issues (topics) that become the American news media's focus when reporting storms and wildfires. To evaluate the tone of the news that creates dramatic images in the disaster reporting, we investigated the occurrence of positive and negative words (sentiment words) in the corpus using Microsoft Excel. It focuses on the verbs, nouns, and adjectives used in the reporting, especially the titles. We used the list of sentiment words prepared by (Hu & Liu, 2004) as a reference.

Results

The *AntConc* word-list analysis reveals that the highest-frequency word in the news reporting storm and wildfire is *say* (382 and 391, respectively). Based on the concordance analysis, the context of *say* relates to various sources of information rather than the issue. The storm information sources include government officials, NOAA, National Hurricane Center, meteorologist, and citizen (witness). In contrast, the wildfire information sources include government officials (county, state, spokesperson, chief. sheriff), service, and fire department sources. Involving various sources of information in the reporting is the strategy by the media to claim the authority (see Tomonto, 2019). However, since the verb

Table 1.
Disaster Corpus

Storm Corpus			Wildfire Corpus		
Newspaper	Articles	Words	Newspaper	Articles	Words
ABC News	5	4171	ABC News	6	4552
Fox News	9	4588	Fox News	8	4105
Huffington post	5	3546	Huffington post	8	5133
Newsweek	3	1355	Newsweek	3	1700
Reuters	5	2574	Reuters	7	3019
The Washington Post	2	1243	The New York Times	3	2174
The New York Times	4	4642	US News	2	578
US News	6	2471	USA Today	6	3503
USA Today	3	2091	VOA News	7	4502
VOA News	8	2901			
Total	50	29582	Total	50	29266

Source: Authors, 2021

Table 2.
Word-Link of Storm News Items

News Item	High-Frequency Word	Generated Aspect
Storm	hurricane (242); wind (124); move (69); Mph (59); heavy (41); Kph (34); catastrophic (29); powerful (29)	Description
	people (118); power (90); damage (79); homes (62); water (58); resident (56); leave (46); hit (45); kill (38); cause (34)	Impact
	Expect (70); warn (40)	Prediction

Source: Authors, 2021

Table 3.
World-Link of Wildfire News Items

News Item	High-Frequency Words	Generated Aspect
Wildfire	winds (79); Lightning (77)	Cause
	people (173); area (146); burn (106); homes (99), acre (86); power (74); air (71); resident (64); smoke (55); destroy (51); force (41); cause (34); threaten (34)	Impact
	firefighter (96); contain (95); evacuate (63); evacuation (62)	Action
	expect (31); warn (25)	Prediction

Source: Authors, 2021

say refers to the information source rather than the issues in the news report, it is excluded from word-link identification.

The word-link from the storm reports generates three major issues pertaining to storm: the storm's description, the storm's impact when it makes landfall, and the storm's prediction. The word-link from the wildfire reporting generates four wildfire major aspects: the cause of a wildfire, the impact of wildfire, the action for fire containment and evacuation, and the wildfire's prediction.

Disaster Issues that Make the News

Storms and wildfires have different behaviors. A storm is observable with the National Weather Service's technology, making it possible to broadcast an early warning. As it moves following the wind direction, a storm gains strength, weakens when making landfall, and finally dies out. With the technology, meteorologists can measure the storm's speed and strength and predict the time it will hit the land and the level of damage it is likely to cause. Unlike storms, wildfires are hardly predictable. NASA's satellite instrument can detect wildfire burning in a particular location (NASA, 2020) but cannot predict when and where it will occur. A combination of favorable weather and human (firefighters') tireless efforts to contain the fire determines how long a wildfire can finally be extinguished. Some wildfires last only for a few days and claimed relatively minor damage, but others categorized as the worst wildfires in US history lasted for weeks and caused extensive damage to the environment and property (earth.org, 2020). These differences contribute to different aspects of disaster that make news. However, both disasters share the same issue in the reportings: the disaster's impact. This finding corroborates (Houston et al., 2012), who reported that media coverage tends to focus on the impact of disaster on humans and the environment. It also supports Pantt's (2019) discourse of horror, i.e., depicting the disaster's dreadful consequences.

The cause of the wildfire is a critical aspect to report as it may be purely natural (sparked by lightning, etc.) or accidental (triggered by human activities). Human-caused fires result from campfires left unattended, the burning

of debris, equipment use and malfunctions, negligently discarded cigarettes, and intentional acts of arson (NPS, 2020). On the other hand, the storm's cause is always purely natural (climate), so it is no longer curious. Another difference is that, usually, a wildfire happens suddenly and may cause immediate impacts. Meanwhile, a storm is identifiable far before it makes landfall to cause damage or devastation. Therefore, the storm description aspect that includes the category and build-up process is more curious to report. Another aspect of the wildfire that makes news is action. A wildfire is a containable event. People will contain the fire, especially deploying firefighters to the scene, evacuating the people, etc. Unlike wildfire, a storm is too powerful to control; people can only let it happen without intervention.

Storm

From the world-link, the dominant issues that make the news are description, impact, and prediction. The followings are an elaboration of each issue.

1) Description

The words *move* (69); *Mph* (59); *heavy* (41); *Kph* (34); *catastrophic* (29); *powerful* (29); *hurricane* (242); and *wind* (124) reflect the storm description. Most news items describe the storm's dynamics, since people are keen on following an update on how the storm develops from time to time. The description focuses on the path (*move*), the maximum sustained wind, and the movement speed (*Mph*, *Kph*); the strength (*powerful*, *heavy*), and the category (*hurricane*). For the sustained wind and storm movement, some media prefer to use Mph (Miles per hour), while the others Kph (kilometer per hour), which are synonymous. The sustained wind relates to the category of the storm. When the winds in the rotating storm reach 39 mph, the storm is called a "tropical storm." Furthermore, when wind speed reaches 74 mph, the storm is officially a "tropical cyclone," or hurricane. (Nasa Science, 2019).

Table 4.
Tropical Cyclone Categories

Category	Wind Speed (mph)	Damage at Landfall	Storm Surge (feet)
1	74-95	Minimal	4-5
2	96-110	Moderate	6-8
3	111-129	Extensive	9-12
4	130-156	Extreme	13-18
5	157-higher	Catastrophic	19+

Source: Nasa Science, 2019

The highest frequency word to describe the storm is *hurricane* (242). Most storms reported in the news grow into the hurricane category, which explains its high frequency. An upgrade status into a hurricane increases the concern on landfall damage, making the news more bleeding.

2) impact

The storm (or hurricane at a later development) causes impacts when it hits the land. The level of damage depends on the wind speed (hurricane category). The highest level of damage, the catastrophic damage, will destroy a high percentage of framed homes, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be inhabitable for weeks or months (The Saffir-Simpson Team, 2019).

These words describe the storm impact: *people* (118); *power* (90); *damage* (79); *homes* (62); *water* (58); *resident* (56); *leave* (46), *kill* (38), *hit* (45); and *cause* (34). The impact on humans (*people*) is the highest since they can be directly and indirectly affected by the storm. Direct impacts on humans include death (being *kill*ed), while indirect impacts include suffering from the damaged basic utilities (*power*, *homes*, *water*). Loss of life readily contributes to emotive reporting, so does the resident's living conditions without electricity and water.

3) Prediction

Another issue is to report the storm prediction, which aims to keep the readers alert. It uses the word *expect* (70) and *warn* (40). The verb *expect* is a prior positive polar word, but its use gives it a negative meaning, thus, contextual negative polar word. The contexts from the concordance analysis are, for instance, 1) "The report said about two inches of snow is *expected*"; 2) "The storm has already spawned tornadoes in its path, and heavy rain is *expected* as well." Meanwhile, the verb *warn* is a prior negative polar word. An example of context from the concordance analysis is 3) "There are hurricane *warnings* and tornado *warnings* in the immediate areas of landfall, but also forthcoming tornado and flood *warnings* for areas within the path of the storm on land."

Wildfire

Unlike storms in summer and winter, wildfire occurs only in summer when vegetation is dry and flammable. Wildfire occurs in some other states in the US, but major wildfires happen in California due to its climate, which has always been fire-prone (The New York Times, 2020). The phrase "wildfire season" implies that wildfire occurs regularly in the US. The unique characteristic of wildfire results in different patterns of reporting. Four issues pertaining to wildfires that make the news are cause, impact, action (for fire containment and evacuation), and prediction.

1) the cause of the fire

The unique characteristic of wildfire lies mainly in its nature-human factor combination for occurring. "Nature creates the perfect conditions for fire, as long as people are there to start the fires" (The New York Times, 2020). However, the world-list analysis reveals two high-frequency words to describe the cause of a wildfire, which are *winds* (79) and *lightning* (77). It implies that the nature factor, rather than the human factor, is a highly dominant cause

of wildfires, supporting the claim that wildfire is a natural disaster.

2) the impact of wildfire

As soon as it starts, a wildfire can immediately cause hazards. The media uses these words related to the impact of wildfires: *people* (173); *area* (146); *burn* (106); *homes* (99); *acre* (86); *power* (74); *air* (71); *resident* (64); *smoke* (55); *destroy* (51); *force* (41); *cause* (34); and *threaten* (34). The impact description emphasizes damages to the environment, property, and human life. Major wildfires burnt an extensive area, thus, threatening residents, destroying hundreds or even thousands of homes, polluting the air to a health hazard level, and forcing people to evacuate. Unlike storm, which does not always force people to evacuate because the surge may still be relatively 'survivable,' wildfire forces people to evacuate because of the health hazard from the heat and smoke. Above all, a wildfire is hardly predictable since it may spread to a larger area, thus, posing a bigger threat.

3) action

A human cannot intervene in a storm. Neither can we prevent it from happening nor reduce it to a lower category. With the wildfire, however, we can contain it. Being containable is another unique characteristic of wildfire. The media uses these words in describing people's actions to deal with wildfire, which are: *firefighter* (96), *contain* (95), *evacuate* (63), and *evacuation* (62). The described actions are done by two agents: the firefighters and residents. The media emphasizes the firefighters' tireless effort to contain the fire, invoking a sense of heroism and pride. Their concern is with the people –to protect the lives and property of other people, and for that, they are ready to sacrifice their own lives. The evacuation story can also be emotional but much less heroic than the firefighter's battle against the wildfire. The firefighter's sacrifice is more inspiring than the evacuation.

4) prediction

The lower frequency of the words *expect* (31) and *warn* (25) in the wildfire reporting than in the storm reporting shows it is less convincing to predict the end of a wildfire. The wind can sometimes be erratic, making it more difficult to control. The strong wind may blow the debris to spark another fire in very unfavorable weather. Therefore, wildfire containment clearly depends on the mercy of nature and firefighters' deployment.

Dramatic Imaging of Storm and Wildfire

Both wildfire and storm are domestic disasters most Americans are very familiar with. Millions of them even have first-hand experience. It is challenging for the media to present a report of recurrent events that continue winning the readers' appeal. For that, the reporting must be able to use images and narration that are dramatic to make it worthy of reading.

The analysis focuses on the titles of the news items. The dramatic reporting starts with the title, primarily through metaphorical verbs that bring images of an animate being. The following are examples of the titles; the underlined are metaphorical verbs. 1) "Dorian <u>Crawls Up</u> US East Coast After <u>Making</u> Landfall Over Cape Hatteras"; 2) "6 Dead As Hurricane Laura <u>Carves</u> Destructive Path Through Louisiana"; 3) "At Least 6 <u>Killed</u>, 175,000 Evacuated as California <u>Battles</u> Hundreds of Wildfires"; and 4) "California Wildfires <u>Force</u> Evacuations in Sonoma and Napa Counties." These titles reflect the conceptualization of storm and wildfire as an enemy of humans.

Image of Storm

The 50 titles of storm reporting use different prior negative polar verbs to depict violent behaviors of the storm: *slam* (7); *hit* (5); *batter* (5); *kill* (4), *strike* (3), and *pound* (2). Other lower frequency verbs with similar associations are: *destroy*, *injure*, *tear*, *crush*, *strain*, *lash*,

unleash, *stall*, *crawl up*, *knock out*, and *trash*. Through these verbs is the media represent the storm as a violent beast. Coherent with the verbs, the titles' prior negative polar adjectives strengthen the representation of the storm as a violent beast. They are: *catastrophic*, *destructive*, *dangerous*, *unsurvivable*, *life-threatening*, and *hazardous*. Besides, the title also uses a negative contextual polarity, namely *powerful*. These negative polar verbs and adjectives represent the storm as a violent beast.

Image of Wildfire

Fire is tangible, but the wind is not. A wildfire has a higher degree of concreteness than a storm. The concreteness (tangibility) of wildfire reduces the need for metaphor in wildfire reporting. As a result, the media titles of wildfire reporting do not use as much metaphor for wildfire as for storm. The frequently used verbs for wildfire are *burn* (8), *force* (6) and *erupt* (3), and *blaze* (2). The verb *burn*, however, is not metaphorical. It is a literal act of fire to "burn." Similarly, the other verbs, *erupt* and *blaze*, are not strongly metaphorical in the context of wildfire, for they are inherent characteristics of fire. Although it does not refer to a specific vehicle, the verb *force* is metaphorical. Other lower frequency verbs for wildfire used in the titles are: *rage*, *scorch*, *kill*, *spread*, *flare-up*, *explode*, *incinerate*, *grow*, *whip up*, *slam*, and *destroy*, which carry metaphorical senses. Despite the lack of a high-frequency metaphorical verb to describe wildfire, the metaphorical verb for the firefighter implies the indirect representation of wildfire, i.e., *battle* (3). The media creates a war scene through the verb *battle*, where the defender (firefighter) protects the territory from the invader (wildfire). The invader encroaches on a more extensive territory while destroying anything on its way. The defender fights back and tries to contain the invader. With this representation, the verb *force* (6) for wildfire gains its metaphorical quality with a more specific vehicle, i.e., troop.

Despite the similar representation of wildfire and storm as an enemy, the media gives different attributes to each, yielding a different enemy. The media brings an image of a violent beast for the storm, which is too powerful to fight against. Man can only let the worst happen and fix what is broken when the beast has gone. Nevertheless, the media brings an image of a vengeful invader for the wildfire, which is conquerable to a certain extent.

Sentiment words for negative tone and imaging

The media creates dramatic images of both storm and wildfire in the titles, and support the images consistently throughout the body of the report with negative sentiment words. Such titles as (1) "Powerful Category 4 Hurricane Laura Slams US Gulf Coast" and (2) "California wildfire whips up fire tornado after showing 'extreme fire behavior'" gain the dramatic picture of storm violent act (title 1) and the wildfire ever-increasing danger (title 2) from the adjectives *powerful* and *extreme*, and the verbs *slam* and *whip up*, respectively. They are sentiment words. The adjective *powerful* belongs to the positive sentiment word list (Hu & Liu, 2004), buit intensifies the hurricane's destructive power as a modifier of a category 4 hurricane. Accordingly, a prior positive polar word that carries a negative sentiment due to its use is classified into a contextual negative polar word.

The sentiment word analysis shows the dominant use of negative polar words (an average of 78%). Table 5 below presents the number of sentiment words in disaster reporting.

These negative sentiment words build the negative tone of the title and help create a dramatic image of the storm and wildfire in the American news media reporting. The ten most frequently used words from each word class are presented in table 6. For instance, the adjectives describing the storm, *threatening* and *devastating*, contribute a strongly negative tone to the title as they bring the image of the savageness of the storm. Similarly, the adjectives describing the wildfire, for instance: *destructive* and *severe*, also do the same to the title of wildfire reporting as they bring the image of toughness of the wildfire.

The highest frequency of nouns in the storm's reporting is *damage*, which refers to property damage affected by the storm. It follows the second criteria for tropical cyclone categorization: landfall damage (Nasa Science, 2019; see Table 4). Unlike the storm, wildfire causes less property damage, but produces a severe health hazard *smoke*, *choking*. The second most frequently used noun in disaster reporting is *warning*, 31 and 26, respectively. As discussed in the aspect of disaster that makes the news, *warning* is part of the prediction for imminent danger. Although both disasters claim human life, the words related to *death* (*die*, *dead*) are less frequently used. The lower frequency of death-related words lies in the cultural context surrounding the death phenomenon in American society. Death is a highly taboo word because of its intense pain inflicted on the living members of the bereaved family. Accordingly,

Table 5.
The Sentiment Words in the Reporting of Storm and Wildfire

Storm						Wildfire					
Noun		Verb		Adjective		Noun		Verb		Adjective	
-	+	-	+	-	+	-	+	-	+	-	+
363	44	382	67	270	174	337	60	495	110	261	173
89%	11%	85%	15%	61%	39%	85%	15%	82%	18%	61%	39%

Source: Authors, 2021

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Table 6.
Negative Sentiment Words Carrying Negative Tone

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Storm						Wildfire					
Noun		Verb		Adjective		Noun		Verb		Adjective	
Damage	77	Kill	38	Catastrophic	29	Smoke	50	Burn	106	Dangerous	20
Warning	31	Blow	19	Severe	16	Warning	26	Destroy	51	Unhealthy	17
Emergency	28	Fell	18	Dangerous	13	Burning	22	Threaten	34	Destructive	11
Death	26	Damage	17	Threatening	13	Death	21	Die	24	Worst	10
Risk	15	Died	15	Devastating	12	Emergency	20	Kill	24	Severe	9
Destruction	14	Destroy	14	Worst	12	Risk	16	Issue	22	Dead	8
Toll	11	Fall	14	Lying	10	Threat	13	Break	19	Vulnerable	8
Devastation	8	Struck	14	Damaging	9	Damage	10	Flee	19	Dense	7
Loss	8	Weaken	14	Damaged	7	Danger	10	Damage	18	Catastrophic	6
Threat	8	Rip	13	Difficult	7	Disaster	10	Rage	17	Critical	6

Source: Authors, 2021

eulogy in the American funeral service hardly mentions death (Munandar, 2019). American people generally deny death, which makes the trauma healing process involving death, such as storms and wildfires, take a longer time.

All the verbs (in Table 6) used in the storm reporting belong to only one semantic field, "destroy". They all refer to the storm as an actor. It shows that the media can keep its consistent focus on the storm throughout the reporting. However, the verbs used in the wildfire reporting belong to at least three different semantic fields: "destroy", "avoid", and "fight", referring to different actors: the wildfire, the affected resident (within the burning area proximity, and the firefighters, respectively. The focus shifts in the wildfire reporting imply that it is more difficult to focus only on one actor, the wildfire, in the media reporting. A storm is inherently more dynamic than wildfire: involving fast movement, which is curious to observe from time to time. On the other hand, a wildfire generally grows slowly, a tedious process to observe.

Among the other word classes, adjective is especially near related to the tone of voice. The highest frequency of adjectives in storm reporting is catastrophic (29), and in wildfire reporting is *dangerous* (20). These adjectives best represent "the bleeding" in the American journalism adage. Moreover, 'catastrophic' is the highest level of damage the storm can cause at landfall (Nasa Science, 2019; see Table 6). Attributing the storm as catastrophic and wildfire as dangerous directly sends alarming images to the readers' minds, and these images will stay in their subconsciousness that natural disaster is an enemy that haunts their lives.

Discussion

The dominant issues selected by major American newspapers in reporting storms and wildfires, as revealed by this research support Houston, et al. (2012), i.e., media coverage focuses on the current impact of disasters on humans, the built environment, and the natural environment. This finding indicates that news media continue to see the disaster impact as the most important aspect contributing to the bleed of a disaster event, which continues to be in line with American journalism's adage, "If it bleeds, it leads" (Cockburn, 2011). This finding is also in line with (Hoon, et al., 2015) that people have great concern for natural disasters as it involves massive deaths and human suffering and brings a huge impact to the aftermath of the victims. The media reported disaster impact and other dominant issues in a negative tone helped by negative sentiment words (both prior and contextual negative polar words) to create an image of natural disasters as the human enemy.

The sentiment word analysis has shown that using negative polar words is dominant (an average of 78%). Among the most frequently used prior negative polar adjectives are *threatening* and *devastating* to describe the storm, and *destructive* and *severe* to describe the wildfire. A much lower percentage of prior positive polar words, an average of 23%, is used in the reporting, but they gain negative meaning from the context, thus, negative contextual sentiment. Along with these (prior or contextual) negative sentiment words, the media present the images of the storm's savageness and wildfire's toughness. The images of savage storms and tough wildfires define the natural disaster as an enemy of humans. The findings of our study support Pantti's proposition about the discourse of emotion in the coverage of the disaster, particularly a discourse of horror. A discourse of horror depicts the tragedy's dreadful consequences with shocking images of pain (Pantti, 2019). These images are provocative to blame natural disasters as the cause of human suffering and place humans as innocent victims.

The negative perception toward natural disasters reflected in American media prevents people from learning the wisdom of coping with a natural disaster. Rather than reminding people about the natural force, the media help people make a scapegoat of our faults, which, among others, is setting up properties in storm and wildfire prone zone. Scapegoating leads people to a less critical attitude to human behaviors that contribute to the severity of the impact. As a result, people will likely continue to suffer from recurring storms and wildfires.

Herman Ovink, the Dutch water ambassador, asserts that the storms are not man-caused, but the catastrophes are manmade (The Guardian, 2019). In other words, the natural disaster is a natural force, while human behaviors trigger the suffering we have to endure. It corroborates (Arnold, 1975,

p. 257) deep reflective thought: "The periodic onrushes of streams and waves frequently bring economic disaster and human trauma. We call such occurrences 'natural disasters', articulating a human penchant for dealing with effect rather than the cause. But in the main, the real cause of damage is faulty land management and unwise governmental programmes, which usually result from the failure of decision-makers to understand or apply rational planning precepts about riverine and estuarine systems. Undue reliance on structures to control the water's great energy is the product of that failure, and the reliance, in turn, tends to produce further disasters and tragedy."

The Dutch show examples of wisdom of dealing with natural disaster. The disasters, to the Dutch, are events that can be expected, planned for – and ultimately avoided. Herman Ovink argues that "We can't prevent [natural disaster] from happening, but the impact that is caused by these disasters we can decrease by preparing ourselves. The storms are perhaps man-caused and you can debate that. But the catastrophes because of the storms? Those are manmade." (The Guardian, 2019).

From the sentiment word analysis results, we infer that the American news media favor a negative tone in their natural disaster reporting. It instils a negative perception of natural disasters as evil and humans as innocent victims in our minds. By framing natural disasters as the enemy, the media does not bring readers into deep reflective thought that our reckless behavior worsens the impact of the disaster. As a result, we shift the blame on natural disasters as 'destructive force' rather than as "natural force".

Conclusion

The recurrence of storms and wildfires in America poses the American news media a challenge to produce disaster reports that can sustain the readers' enthusiasm. For that, the

news media select only the aspects (issues) that are both curious and able to create dramatic images: 1) the storm's description, impact, and prediction about the time of landfall and the level of damage; 2) the wildfire's cause, impact, people's action, and the prediction about the wildfire. In addition, the media use sentiment words for the dramatic imaging of storms and wildfires. Through sentiment words, the media represent both disasters as an enemy of human kind: the storm as a violent beast and the wildfire as a vengeful invader. These slightly different representations owe to the disaster's different characteristics. Using negative sentiment words carries the media's negative tone in the reporting, i.e., blaming the disaster.

Our research findings will help journalists/media be aware of the effect of dramatic imaging of natural disasters in their reports. Since news media influence the way people look at the world and make them change their views, they must be responsible providers of information. They need to tone down the dramatic imaging by selectively using sentiment words to prevent natural disaster misperceptions. As for future research, concordance analysis of disaster corpus offers insight for a more accurate understanding of the media's representation of storms and wildfires happening in the US. It enables the research to use a large body of data more realistically, reflecting the fact and analysing it more rigorously to reveal the underlying structure of the discourse and the inseparable relations between form and meaning.

Keeping up with the digital humanity era, the corpus-assisted discourse studies in this article offers a significant contribution to corpus linguistics development. However, the size of corpus developed for our research is relatively small considering both the number of American news media and the reporting of weather-related disasters happening in America. A better corpus will be built from

major online news media and report of storm and wildfires and include local newspaper and reporting of other kinds of natural disaster such as flood and earthquakes, which also happen in America.

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