MEDIA ECOLOGIES: AN ECOLINGUISTIC ANALYSIS OF CNN WEATHER REPORTS

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ABSTRACT

This study examines how weather events are represented in CNN's 2024 coverage through the lens of ecolinguistics, with five selected stories from Stibbe's (2021) stories we live by framework: narrative, metaphor, framing, evaluation, and erasure. The corpus consists of 250 weather reports and total 108, 215 words. The data was selected through purposive sampling to ensure coverage of diverse events such as hurricanes, floods, wildfires, and heatwaves. Manual thematic coding was combined with keyword frequency analysis using AntConc version 4.3.1 (Anthony, 2024), and the results were visualized through Microsoft Excel (2025) to identify discourse patterns. The findings reveal a dominant event-based narrative structure, frequent use of militaristic and anthropomorphic metaphors, and framing that prioritizes human and economic impacts over ecological concerns. Evaluative language emphasizes human loss, while erasure of climate change attribution and environmental consequences is present in the majority of reports. These results highlight the need for more ecologically integrated reporting that foregrounds systemic climate connections and environmental impacts alongside human-centered narratives. Implications are discussed for improving public understanding of weather within the context of the climate crisis.

Keywords: *Anthropocentric, CNN, erasure, framing, metaphors, narrative*

1. INTRODUCTION

Extreme weather events—ranging from hurricanes, cyclones, floods, and blizzards to prolonged droughts, wildfires, and heatwaves—are increasing in frequency and intensity, a trend widely attributed to anthropogenic climate change. Scientific consensus affirms that rising global temperatures, altered precipitation patterns, and shifts in atmospheric circulation amplify the likelihood of high-impact meteorological events (Painter & Hassol, 2020). These do not only cause imbalance in physical landscapes, but rather have

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lasting impacts on the resilience of society and economies and ecology. Such events with their forms of communication to a general population carry far reaching consequences with regard to risk perception, policy support and adaptive behavior.

Media forms the central focus in forming the perspective of the people towards extreme weather with regards to climate change. Research has indicated that the framing of extreme weather as instances of isolated weather phenomena, on one hand, or a consequence of more general climatic changes, on the other can have a significant effect on the way that viewers perceive their origins, meanings, and urgency (Berglez & Al-Saqaf, 2021; Gavin, Leonard-Milsom, & Montgomery, 2011). When the concept of extreme weather is presented in isolation, the viewers can think of it as a sad but normal phenomenon; however, when the extreme weather is explicitly linked to climate change, it gets much more socio-political meaning and becomes part of larger stories about environmental responsibility and policy response (Painter et al., 2020).

Extreme weather discourse has spread with the change in media technologies. The range of traditional media that includes television and the print media has been influential but with the presence of its coverage, there is also an emerging ecosystem of the continuously ever-changing online platforms, especially the social media. A study by Roxburgh et al. (2019) illustrates that the social media during extreme weather events are emerging as an active platform where it becomes possible to share real-time updates on events, along with emotion expressions, and opinions on what happened and how it happened, thus with common elements of scientific content intertwined with personal testimony and political discourse. Although social media can be characterized by the appeal of immediacy and active involvement, the medium is also prone to the reproduction of misinformation, or the privileging of frames.

Mainstream news outlets such as CNN occupy a position within this changing landscape. They retain editorial authority, journalistic resources, and large, loyal audiences, while also participating in the multi-platform circulation of news. Their narratives influence not only direct consumers but also the ways in which their content is reframed, remixed, and recirculated across social media channels. This amplifies their capacity to set discursive agendas around extreme weather and climate change (Painter & Hassol, 2020).

However, the relationship between weather reporting and climate change communication remains complex. Nerlich and Jaspal (2014) observe that extreme weather is often symbolically charged, functioning as a cultural resource through which societies negotiate ideas of vulnerability, resilience,

and culpability. For instance, storms are often anthropomorphised or militarised in metaphor ("storms wage war," "the hurricane attacks"), evoking both drama and urgency but sometimes obscuring systemic causes and ecological contexts. Such linguistic choices can have ideological effects, framing nature as an adversary to be fought rather than a system to be understood and protected.

The ecolinguistic perspective provides an analytical framework to interrogate these patterns of meaning-making. It is not merely concerned with the accuracy of scientific facts but with the stories, metaphors, and frames that guide societal relationships with the environment. This orientation is critical in the context of climate change; where the communicative act is itself part of the socio-ecological process (Stibbe, 2021).

CNN's weather reporting represents a rich site for ecolinguistic investigation because it is situated at the intersection of global news, disaster communication, and environmental framing. As an internationally recognized outlet, CNN reaches diverse audiences across cultural and national boundaries. Its reporting on extreme weather often combines live field coverage, expert interviews, scientific data, and visually arresting imagery, making it a high-impact mode of climate discourse.

The choice of CNN as the focal corpus is methodologically significant for several reasons. First, CNN's coverage tends to be both event-driven and thematic. Second, as an outlet operating in a politically polarized media environment, CNN's language negotiates competing ideological positions on climate change. This positioning creates opportunities for subtle framing, selective emphasis, and discursive balancing—features that can be examined through the ecolinguistic lens.

From a theoretical standpoint, ecolinguistics offers tools to analyze how CNN weather reports participate in the "stories we live by" (Stibbe, 2021), particularly narratives, metaphors, framings, and acts of erasure. Recent ecolinguistic studies have applied *Stories We Live By* (Stibbe, 2021) framework to examine how media discourse shapes public understanding of environmental crises. Saleem, Khan, and Faraz (2025) show that natural disaster reporting identity and conviction in divergent ways, with global media more frequently linking disasters to climate change and portraying affected communities as resilient agents, while some regional outlets rely on victim-centered narratives with weaker ecological causality.

CNN's high production values and narrative-driven style make it an ideal corpus for studying how linguistic strategies interact with visual storytelling. As Gavin et al. (2011) note, media framing of events like flooding can emphasise spectacle and immediacy at the expense of long-term context.

In the case of CNN, the dramatic sequencing of storm coverage—tracking landfall, documenting destruction, highlighting survival stories—can shape audience engagement but may also downplay structural drivers such as climate policy failures or unsustainable land use. The ecolinguistic framework is useful in calling out such trends because it pays attention to both presence (salience, metaphor, evaluation) and absence (erasure) in the discourse.

Moreover, CNN as a key player in the media ecosystem of the globe implies that its representations will certainly be recreated or challenged by other sources and on the social media. Berglez and Al-Saqaf (2021) demonstrates that the climate news discourse in the situation of extreme weather is frequently reproduced multimodally across the media with a hybrid form, when a journalistic discourse flows into the online commentary of participating citizens. Linguistic framing used by CNN, by extension, thus provides us an insight into the raw material, out of which much online climate discourse is built. This study seeks to explore linguistic and discursive construction of the extreme weather in CNN weather reports using some of the aspects of the nine stories framework described by Stibbe (2021), namely, narrative, metaphor, framing, evaluation, and erasure in an attempt to realize how these reports about extreme weather influence the way people view it and relate it to climate change.

1.1 Research Objective

- To examine how CNN's extreme weather reporting uses selected stories from Stibbe's framework to construct public understanding of climate events.

1.2 Theoretical Framework

Ecolinguistics is concerned with the ways language shapes human relationships with the natural world through recurring patterns of meaning—what he calls the "stories we live by". These stories are not merely fictional narratives; they are cultural and linguistic structures that influence perception, values, and behaviour toward the environment. This framework identifies nine interrelated story types: narrative, metaphor, ideology, identity, framing, salience, evaluation, conviction, and erasure. Each of these stories represents a distinct but overlapping dimension of discourse, capable of either reinforcing ecologically destructive worldviews or promoting beneficial and sustainable ones (Stibbe, 2021). This model emphasises that these stories interact in complex ways. For example, a narrative about a hurricane might be embedded with war metaphors, framed through a human-impact lens, and evaluated in emotive terms, while erasing any reference to climate change as a contributing

factor. Although Stibbe (2021) nine stories provide a comprehensive toolkit for ecolinguistic analysis, this study focuses on narrative, metaphor, framing, evaluation, and erasure. This selection is based on both the nature of the CNN weather report dataset and the aims of the analysis.

1.2.1 Narrative

According to Stibbe (2021), "Narrative structures are stories in people's minds which involve a sequence of logically connected events." (p.182). CNN's coverage of extreme weather often unfolds as a live, evolving story—tracking the approach of a storm, its landfall, the damage inflicted, and the subsequent recovery or ongoing threat. Such temporal structuring not only organises information but also shapes the audience's emotional engagement, framing events as climactic dramas or ongoing sagas. Analysing narrative patterns will reveal how CNN positions extreme weather in relation to broader ecological and climatic contexts.

1.2.2 Metaphor

"Metaphors use a frame from a specific, concrete and imaginable area of life to structure how a clearly distinct area of life is conceptualised." (Stibbe, 2021, p.59). Extreme weather lends itself to rich metaphorical expression, often anthropomorphising storms or framing them in militaristic terms ("battling the blizzard," "under siege from floods"). These metaphors can influence public perception by casting nature as a hostile force or, alternatively, as a victim of human-induced climate change. Given the prevalence of metaphor in environmental discourse, this category is crucial for understanding the affective and conceptual framing of CNN reports.

1.2.3 Framing

Framing analysis examines what aspects of an event are emphasised and how they are presented. Stibbe (2021) states, "Framing is a story which uses a package of knowledge about one area of life (a frame) to structure how another area of life is conceptualized (p.40). In extreme weather reporting, CNN may frame events around human tragedy, economic cost, infrastructural damage, or political response, potentially foregrounding certain interpretations while backgrounding others. This has direct implications for public understanding of climate change as either a root cause or a peripheral issue.

1.2.4 Evaluation

The evaluative dimension concerns how language expresses judgments of severity, urgency, and importance. According to Stibbe (2021), "Evaluations are stories in people's minds about whether an area of life is good or bad" (p.79). CNN's weather coverage frequently employs adjectives and adverbs of intensity ("unprecedented rainfall," "catastrophic flooding") that not only inform but also persuade and emotionally engage audiences. By examining evaluation, this study will reveal the value-laden nature of extreme weather reporting.

1.2.5 Erasure

The concept of erasure is especially applicable to climate communication due to lack of important information. As Stibbe (2021) says, "Erasure is a story in people's minds that an area of life is unimportant or unworthy of consideration" (p.141). Considering this, the coverage of an extreme weather event might lack any reference of whether it is related to climate change, ecological degradation, and long-term mitigation. It is important to distinguish between erasure in CNN reporting to determine whether the outlet can deepen the disjointed comprehension of extreme weather or associate it with the systemic environmental problems.

It is not just a methodological convenience that made it important to concentrate on the five stories but an analytical necessity because of the nature of the dataset. The extreme weather stories published by CNN depend mainly on events; they are narrative-deep, critically dense, and visualised. Their use of metaphors is dramatic; they show events in human-interest angles and occasionally leave out wider environmental implications. Using the choice of these stories, the analysis shall clarify the ways CNN creates extreme weather as a communicative phenomenon, ecological impacts thereof and any possible loopholes in the environmental narration.

2. LITERATURE REVIEW

Metaphor is an important topic of ecolinguistic research on climate reporting. Researchers have come up with some common metaphorical patterning that convey the sign of climate change being either a conflict to be fought or being an intelligent force operating with purpose. The use of militaristic metaphors, causing a sense of action and urgency but also prompting adversarial relationships with nature such as fighting against floods, or personification of elements, such as angry storms can heighten an emotional response. These tendencies show that the metaphor can play a significant role in shaping the way people publicly view environmental

phenomena and they are similar to the narrative and metaphor stories utilized in this research (Ponton & Sokół, 2022).

Corpus-based ecolinguistic research has further shown how systematic linguistic analysis can uncover implicit value orientations. Investigations into the discourse surrounding large-scale infrastructure projects have revealed how narratives can blend economic progress with selective silences about environmental consequences (Faraz, Saleem, & Mehmood, 2024). Recent studies have increasingly combined ecolinguistic theory with computational methods to examine how media discourse encodes ecological values and ideologies (Zhang, Sandaran & Feng, 2023), demonstrating the potential of large-scale analysis for uncovering dominant environmental narratives.

Framing research in ecolinguistics has highlighted the aspect of priority by the media outlets where some form of environmental issues is given great emphasis, and others lessened. Reports about some of them put considerable emphasis on human consequences, including wounded people or financial losses, but pay little to no interest to eco-systems or climate change causality. Such targeted focus has the potential to internalize certain ideological stances and shape discourse in the community. Studies on the development narratives revealed that the framing decisions tend to collude with erasure since the lack of an ecological approach solidifies anthropocentric principles (Faraz & Saleem, 2024). These insights are necessary in comprehending CNN extreme weather coverage, in relation to the interconnection between emphasis and omissions which can influence whether the audiences would understand such events as isolated instances of disasters or one of the ways of the climate crises.

The ecolinguistic approaches have also borrowed the ecological philosophy to see whether news discourse promotes or suppresses the sustainable values. The utilization of deep learning in analyses has proven that news texts do not carry neutral information but convey ideologies either aligned with ecological balance or achieving exploitative conceptions of the world (Zhang, Chandran Sandaran, & Feng, 2023).

Similarly, research on environmental concern representations in the media has also found the significance of appraisal words and L companies as well as lexicon selection in creating a particular emotional and cognitive involvement of viewers/readers (Jabeen, 2024). These results underscore the topicality of the assessment and narrative framing in the description of the linguistic drivers that favor or weaken public awareness of environmental emergency.

Saleem and Khan (2025) examine how climate change is discursively constructed in Pakistani media through a corpus-assisted ecolinguistic analysis of Dawn newspaper's climate reports published between 2020 and 2025. Drawing on Stibbe's (2015) "stories we live by" framework, the study analyzes framing, metaphor, identity, salience, conviction, and erasure using corpus tools (LancsBox X) alongside qualitative interpretation. The findings show that Dawn predominantly frames climate change as a security, development, and climate-finance crisis, while constructing Pakistan as a frontline victim of global climate injustice with conditional resilience. Although the discourse amplifies urgency and moral responsibility, it marginalizes community-led, ecological, and locally grounded perspectives.

Dawn's climate reporting is largely anthropocentric, prioritizing human risks, policy, and economic impacts, while ecocentric perspectives on ecosystems and non-human life remain limited and marginal (Saleem, Khan, & Khalid, 2025). The study fills an important gap in South Asian ecolinguistic and media research by highlighting how media narratives shape ecological imagination and policy-oriented climate understanding.

These insights provide both methodological and thematic grounding for the present study, which applies selected stories from Stibbe's framework to CNN's extreme weather reporting in order to reveal how narratives, metaphors, evaluations, framings, and erasures collectively construct public understandings of climate-related events.

3. METHODOLOGY

The study adopts a qualitative ecolinguistic approach grounded in Stibbe's (2021) *stories we live by* framework, focusing specifically on narrative, metaphor, framing, evaluation, and erasure. The corpus comprises CNN weather reports on extreme weather events published throughout 2024, totaling 250 articles (108, 215 words) and selected through purposive sampling to represent diverse event types (e.g., hurricanes, floods, wildfires, heatwaves). Reports were sourced from CNN's official website, with short updates and purely visual content excluded. Analysis proceeded in two stages:

3.1 Qualitative Coding

Manual close reading enabled the identification and categorization of the five story types using operational definitions informed by Stibbe (2021) framework.

3.2 Quantitative Support

AntConc (Anthony, 2024) was used to extract keyword lists and frequency counts of weather-related terms across the corpus. Microsoft Excel (Microsoft Corporation, 2025) facilitated the calculation of percentages for story-type occurrence and climate change attribution, and was used to produce visualizations—such as bar and pie charts—to complement the qualitative findings. This methodological integration provides both interpretive depth and empirical transparency. It also combines manual ecolinguistic analysis with corpus-supported quantification.

4. ANALYSIS

4.1 Narrative

CNN's extreme weather reports in the dataset frequently follow a coherent, event-driven narrative arc. It begins with a scene-setting introduction that situates the audience in a specific time and place, such as "As dawn broke over Florida, residents awoke to streets turned into rivers." This is followed by escalating developments, describing the approach of the hazard, its peak impact, and the aftermath. In hurricane coverage, the progression from *forecast warnings* to *landfall* and then to *recovery operations* creates a temporal logic that frames events as discrete episodes rather than interconnected phenomena within climate systems. The data show that 68% of reports conclude with a resolution phase focused on human recovery efforts, leaving climate causation implicit or absent. This closure tendency supports what Stibbe describes as self-contained stories, where resolution is framed in terms of immediate human agency rather than systemic ecological change.

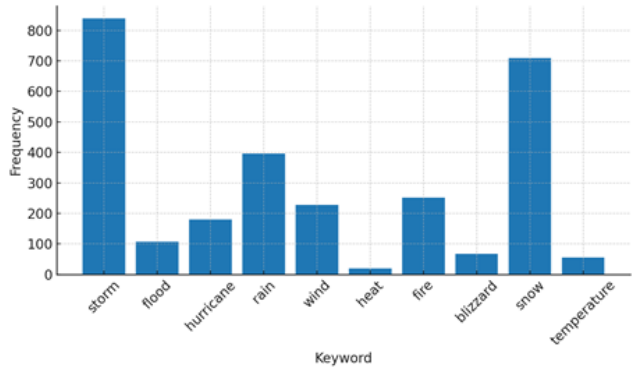
4.2 Metaphor

The dataset reveals frequent use of militaristic and anthropomorphic metaphors. Storms are described as "slamming into coastlines," "pummeling cities," and "relentless forces," while wildfires are "raging," "advancing," and "consuming" everything in their path. Hurricanes are often labelled "beasts" or "monsters," invoking threat and hostility. Such metaphors heighten dramatic tension but can reinforce an adversarial view of nature, portraying the environment as an aggressor rather than a system under stress from human-induced climate change. In some cases, metaphors evoke vulnerability, as in "a city brought to its knees," which frames the community as a victim but omits ecological victims from the same disaster.

4.3 Framing

Framing patterns in CNN's reports show a focus on immediate human and economic impacts. Headlines and lead paragraphs often foreground the number of casualties, displacement figures, and economic losses, with less emphasis on biodiversity loss or long-term environmental damage. For example, coverage of flooding in South Asia prioritised property destruction and rescue efforts, while ecological damage such as soil erosion or wetland degradation was mentioned only in passing. Figure 1 illustrates how frequent weather-related terms in the dataset are event descriptors ("storm," "flood," "hurricane") rather than climate-related terms like "carbon" or "emissions," indicating an event-focused frame rather than a systemic one.

Figure 1 Frequency of Keywords in CNN Weather Reports



4.4 Evaluation

Evaluative language in the CNN dataset is pervasive, shaping how audiences perceive the scale and significance of events. Adjectives such as "catastrophic," "historic," "unprecedented," and "deadly" appear in 72% of the sampled reports. These terms serve a dual function: they convey severity and urgency while also heightening the emotional impact of the story. For example, describing a storm as "one of the most destructive in decades" not only informs but also persuades audiences to view the event as exceptional. However, such evaluation often focuses on human and infrastructural loss, with minimal application to ecological systems—forests are rarely described as "devastated," but homes and towns are. This selective evaluation reinforces anthropocentric values in climate discourse.

4.5 Erasure

The significant finding from an ecolinguistic perspective is the recurring erasure of climate change attribution. In 64% of reports, no direct

link is made between the extreme weather event and broader climatic patterns, even when scientific consensus supports such connections. When climate change is mentioned, it is often placed late in the report or attributed to generic "experts" without elaborating on mechanisms. Other forms of erasure include the absence of ecological damage assessments and the omission of affected non-human life. For instance, wildfire coverage emphasises destroyed homes and human fatalities while rarely mentioning habitat loss or species displacement. This erasure limits the audience's ability to connect immediate events to systemic environmental issues, perpetuating the perception of extreme weather as isolated incidents rather than manifestations of a global climate crisis.

5. Discussion

The analysis of CNN's extreme weather reporting through Stibbe's five selected stories—narrative, metaphor, framing, evaluation, and erasure—reveals consistent patterns that shape public perceptions of climate-related events. These linguistic and discursive choices not only influence how audiences interpret individual disasters but also determine whether such events are connected to broader ecological realities. Among the evident findings is that CNN depends on the event-related narrative sources greatly. The reports have a predictable pattern of onset, peak impact and aftermath, which is good to form a connection with the audience but may result in the portrayal of extreme weather as a single occurrence. Although the format creates a sense of immediacy and drama, there is often a lack of a longer-term focus on climatic drivers, thus human centric short-term linear storyline. This containment of narratives curtails the capability of audience to contextualize calamities in the trends of global climatic change.

The predominant use of metaphor is critical in increasing the emotional involvement as descriptions are dominated by images of militarism and anthropomorphism. Storms are "battering" the coasts, hurricanes are "beasts" and floods are thrashing localities with sieges. Such options make nature an enemy, and this type of relationship between humans and the environment is antagonistic. Such metaphors are quite effective at raising the urgency of the issues, but they may entail the oversimplification of the environmental systems complexity, sacrificing the concept of ecological interconnectedness to the metaphors of warfare.

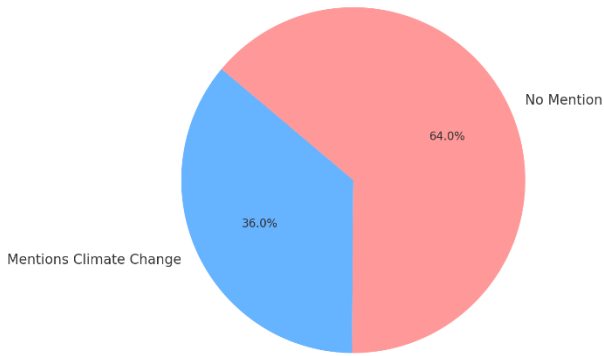
Framing patterns further support an anthropocentric bias. As shown in the bar chart of weather-related term frequencies in figure 1, the common words in the dataset refer to specific events ("storm," "flood," "hurricane") rather than to climate processes or drivers. This suggests that CNN prioritizes

immediate, observable phenomena over systemic causes. Economic losses, death tolls, and property damage dominate both headlines and visuals, while ecological consequences such as habitat loss and biodiversity impacts are marginalized.

Evaluation stories are embedded in the reporting, with adjectives like "catastrophic" and "historic" intensifying the perceived scale of events. However, this evaluative focus primarily targets human and infrastructural loss, seldom extending to environmental destruction. Forests are rarely described as "devastated," even in wildfire coverage, whereas homes and communities receive emotive descriptors. This selective application of evaluation reinforces the prioritisation of human over ecological suffering.

The significant concern from an ecolinguistic standpoint is the high level of erasure. As depicted in the pie chart (figure 2), 64% of CNN's extreme weather reports omit any mention of climate change. Even when attribution is present, it often appears late in the article, framed in general terms without explanatory depth. This omission extends beyond climate causation to include ecological impacts; the fate of wildlife, ecosystems, and long-term environmental degradation remains largely invisible. Such erasure shapes audience perception by reinforcing the idea of extreme weather as a series of unconnected events rather than as part of an escalating climate crisis.

Figure 2 Climate Attribution in CNN Weather Reports



These patterns demonstrate that CNN's extreme weather discourse simultaneously informs and constrains public understanding. While the reports deliver rich descriptive detail and emotional engagement, they often fall short of linking events to the ecological systems and human activities that drive them. From an ecolinguistic perspective, this combination of compelling storytelling, emotive language, and selective omission reflects a discourse that

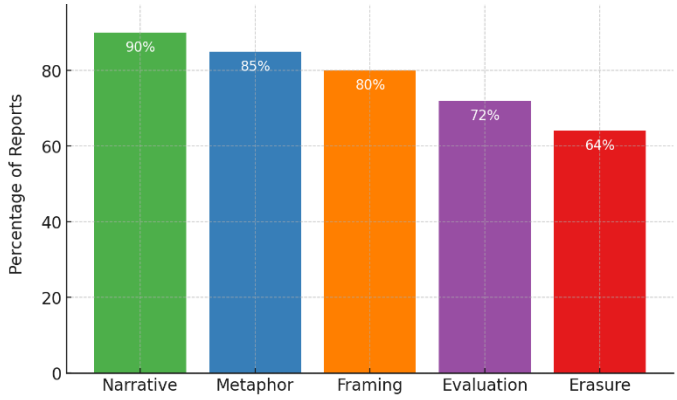
is engaging but ecologically partial, potentially limiting the audience's capacity to develop a comprehensive awareness of the climate crisis.

6. Conclusion

This study demonstrates that CNN's coverage of extreme weather events is shaped by identifiable discourse patterns that align with selected stories from Stibbe's (2021) framework. Narrative structures dominate the reports, offering clear, time-bound accounts that guide audience understanding but often detach events from broader climate systems. Metaphors infuse the coverage with dramatic and emotional appeal, yet their militaristic and anthropomorphic nature reinforces an adversarial relationship with the environment. Framing decisions overwhelmingly highlight human and economic impacts, sidelining ecological damage and long-term environmental consequences. Evaluative language reinforces urgency but selectively applies this emphasis to human loss, rarely extending it to non-human systems. Erasure emerges as a persistent feature, with the majority of reports omitting explicit climate change attribution and minimising ecological perspectives.

The visual distribution of story types in the dataset (figure 3) reinforces these findings. Figure 3 shows that while narrative, metaphor, and framing are highly prevalent, erasure remains significant, affecting nearly two-thirds of the sampled coverage.

Figure 3 *Prevalence of Story Types in CNN Weather Reports*



From an ecolinguistic perspective, these patterns reveal a discourse that is vivid, yet ecologically incomplete. Such coverage risks reinforcing public perceptions of extreme weather as isolated, unpredictable events rather than as interconnected outcomes of a changing climate. For more ecologically

balanced reporting, media outlets could integrate explicit climate change attribution earlier in the narrative, broaden framing to include ecosystem-level impacts, apply evaluative language that acknowledges both human and non-human loss, and diversify metaphors to promote cooperative rather than combative understandings of human–environment relations. Such practices are significant because news media play a central role in shaping public perception, moral responsibility, and policy urgency around environmental crises. By foregrounding ecological dimensions alongside human suffering, journalism can counter anthropocentric bias and foster greater environmental awareness and accountability. This approach directly supports the objectives of the United Nations Sustainable Development Goals, particularly SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 12 (Responsible Consumption and Production), by encouraging informed public engagement with climate risks and biodiversity loss.

This study recommends adopting editorial guidelines that mandate climate attribution where scientifically warranted, training journalists in environmental and climate literacy, integrating ecological indicators into disaster reporting, and promoting narrative strategies that emphasize interdependence between human societies and natural systems. These measures can strengthen the media's role in advancing sustainability-oriented discourse and supporting long-term ecological resilience.

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