Machines, Monsters, and Coffin Corners

Broadcast Meteorologists' Use of Figurative and Intense Language during Hurricane Harvey

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ABSTRACT: During impactful weather events, television broadcast meteorologists act as high-profile risk communicators by interpreting complex weather information for viewers. However, the specific language choices broadcast meteorologists make in these situations have rarely been studied. This qualitative study investigates how meteorologists used figurative and emotionally intense language to interpret threats and impacts during Hurricane Harvey in August 2017, using 24 h of live broadcasts from KHOU, a Houston CBS affiliate. The results of this inductive, thematic analysis suggest that KHOU meteorologists framed Harvey as an all-encompassing monster and as a heat-seeking machine. The meteorologists also relied on emotionally intense language to emphasize Harvey's extreme threat and to express their concern and disbelief about Harvey's impact. This study indicates the specific and multifaceted ways broadcast meteorologists communicate risk and science during high-impact events and identifies key questions for future research.

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During high-impact weather events, television broadcast meteorologists communicate risk and science information. Traditionally, broadcasters have been described as risk communicators who provide information and offer protective action advice during weather events (Wilson 2008). Viewers turn to local broadcast meteorologists for this information more than other sources like cable news and the National Weather Service (NWS) (Lazo et al. 2009), even in the social media age (Hickey 2015) and especially during hurricanes (Rasmussen Reports 2017). As such, broadcasters act as intermediaries between the NWS and the general public (Demuth et al. 2012), where they have a direct influence on public decision-making during disasters (Sherman-Morris 2005).

Television broadcast meteorologists also serve as science communicators by interpreting meteorological science through “stories” that help viewers make sense of complex events (Demuth et al. 2012). Previous research has explored how broadcast meteorologists act as television “station scientists” (American Meteorological Society 2019) by communicating scientific knowledge tangential to meteorology (Wilson 2008; Henson 2010; Maibach et al. 2017), but few academic studies have investigated how meteorologists communicate *meteorological* risk and science. There are a few notable exceptions—for instance, Daniels and Loggins (2007) studied the visual tools broadcast meteorologists use to communicate hurricane threat, while Doherty and Barnhurst (2009) demonstrated how meteorologists discuss day-to-day weather, like rain and temperature forecasts.

This study adds to existing research by investigating how broadcast meteorologists use figurative and intense language to communicate science and risk during a high-impact weather event. Figurative language provides a framework for understanding one thing in terms of another (Lakoff and Johnson 1980) and thus offers a convenient way to make sense of complex scientific information by translating the unfamiliar to the familiar (Gentner 1983). Intense language evokes negative emotions like fear, shame, and guilt (Hamilton et al. 1990), often through warnings of death or injury (Morss and Hayden 2010). While questions remain regarding the effectiveness of intense language for weather communicators (Perreault et al. 2014; Morss et al. 2016), intense language can change attitudes and behaviors in other risk contexts (Witte and Allen 2000; Tannenbaum et al. 2015).

Specifically, this study examined how meteorologists at KHOU, Houston’s CBS affiliate, chose to use figurative and intense language during Hurricane Harvey. On 25 August 2017, Harvey made landfall more than 100 miles south of Houston. While Houston was spared from Harvey’s wind and storm surge, the city was inundated with 3–4 ft (0.8–1.1m) of rainfall (Fig. 1), leading the National Hurricane Center to describe Harvey as “the most significant tropical cyclone rainfall event in U.S. history” (Blake and Zelinsky 2018, p. 6).

Hurricane Harvey posed multiple communication challenges for the KHOU meteorologists, including the extreme risk posed by inland flooding and the delayed onset of heavy rain in Houston. The KHOU meteorologists also faced personal challenges, such as sleep deprivation, anxiety about the safety of their families, and the flooding of their studio (B. Garner 2019,

personal communication). The flood eventually forced the meteorologists to broadcast out of a makeshift studio in a second-floor conference room before evacuating their building and going off air (*Houston Chronicle*, 17 November 2017).

This study uses a content analysis of KHOU live broadcasts in order to understand the language choices of broadcast meteorologists as they navigated the multiple meteorological and personal challenges posed by a catastrophic disaster. These results provide other weather communicators guidance that can be used to better inform their future communication during high-impact weather events.

Methods

Data. The data for this study consist of KHOU's recorded broadcasts during Hurricane Harvey. Recorded broadcasts from KHOU were located on YouTube by searching for "KHOU Harvey live." The initial search yielded four videos, which included 21 h 26 min of live broadcasts during a 27-h period between 0700 central daylight time (CDT) 26 August and 1000 CDT 27 August 2017 (CDT = UTC – 5 h). This period includes coverage on the morning of 26 August 2017, before Harvey's worst impacts began in Houston, through the morning of 27 August 2017, when KHOU went off air due to flooding (Fig. 2). Several other search queries were executed, such as "KHOU Harvey broadcast" and "KHOU Harvey coverage"; however, no additional videos were located. Search queries were also performed for the other Houston broadcast stations; however, KHOU was the only station with publicly available videos during the peak of the storm. Once located, videos were downloaded and transcribed using Temi. Temi is an online service offering automatic speech to text transcription. The first and second authors verified the transcriptions to correct transcription errors before analysis.

The KHOU broadcast team consisted of four meteorologists: David Paul (chief), Chita Craft (morning), Brooks Garner (weekday daytime), and Blake Matthews (weekend). During the coverage period, Paul appeared on-screen or narrated off-screen for 2 h 15 min, followed by Garner (1 h 48 min), Craft (1 h 36 min), and Matthews (1 h 4 minutes) (Fig. 3). In total, the meteorologists spoke for 6 h 44 min, almost one-third of the study period. The rest of the coverage period consisted of dialogues from anchors and journalists in the field.

Fig. 1. (a) Hurricane Harvey's track and wind field. White/gray corresponds to areas with maximum wind gusts above 34 kt (17 m s^{-1}), light orange 50 kt (26 m s^{-1}), and dark orange 64 kt (33 m s^{-1}). Tropical cyclone positions are shown at 12-h intervals (0000 and 1200 UTC). Date labels correspond to the tropical cyclone position at 0000 UTC on the date listed. Data are from NHC tropical cyclone archive. (b) Accumulated rainfall from 25 to 31 Aug 2017. Data are from Advanced Hydrologic Prediction Service (AHPS) precipitation archive.

Fig. 2. A timeline of Hurricane Harvey's intensity (in terms of Saffir-Simpson category number; colored boxes on the bottom), rainfall intensity in the Houston metro area (colored arrows, where green denotes light rain, yellow moderate rain, and red heavy rain), and the four KHOU videos included in the analysis (black arrows). Times are in central daylight time.

Analysis. The transcripts were analyzed using an inductive thematic analysis, which allows researchers to organize messages into themes (Braun and Clarke 2006). Initial codes were developed based on “what is in the data and what is interesting about them” (Braun and Clarke 2006, p. 88)—in this case, risk and science communication tactics. Next, the authors discussed and defined these codes. After several rounds of revision, the lead author coded the rest of the transcript at the sentence level using NVivo, a qualitative data analysis program. Codes were not mutually exclusive.

Fig. 3. A timeline showing how many minutes each broadcast meteorologist appeared on-screen or narrated off-screen for each hour of coverage during (top) morning and evening coverage on 26 Aug 2017 and (bottom) continuous overnight coverage on 26 and 27 Aug 2017. Times are in central daylight time.

Once coding was complete, the lead author analyzed the initial codes and the individual coded extracts to identify broader themes and categories through questioning the data and using a constant comparison process (Corbin and Strauss 2015). This process entailed comparing coded extracts to each other “in order to determine if the two data are conceptually the same or different” (Corbin and Strauss 2015, p. 94). If the coded extracts were conceptually similar, they were grouped into concepts that were then linked together using diagrams and thematic maps. This process of comparison and linking data together continued iteratively until all coded extracts fit cleanly into the developed thematic maps.

In total, the analysis identified six major themes. To communicate atmospheric science, the meteorologists relied on broad figurative descriptions of Harvey as a monster and a machine, and used specific frames to explain Harvey’s threat, dynamics, and impact. To communicate risk, the meteorologists described Harvey’s impact using intense adjective modifiers, compared Harvey to historic flooding events, and expressed their own personal feelings of concern and disbelief.

Results

Figurative language to communicate science. In their role as science communicators, the KHOU meteorologists relied on two figurative frameworks to represent Harvey: Harvey as a monster and Harvey as a machine. The broadcasters also employed figurative language to interpret specific aspects of the storm, such as its heavy rain threat, its underlying dynamics, and its impact on the Houston area. In the following sections, quotes from the transcript are followed in parentheses with the date, time, and speaker.

HARVEY AS A MONSTER. When describing Hurricane Harvey, the KHOU meteorologists frequently personified the storm as a hungry monster seeking sustenance. For instance, Paul described Harvey as “just sitting and spinning and grabbing moisture from off the Gulf of Mexico and pulling it up” (2254 CDT 26 August 2017). Harvey was just trying to stay alive, grabbing and pulling “food” (i.e., Gulf of Mexico moisture) inward in order to satisfy its appetite. The use of the term “feeder bands” (used 87 times), a common meteorological description of the swaths of rain flowing into and around a tropical cyclone, fed into this analogy. As Harvey moved over land and lost access to its “food,” the monster struggled to survive. Matthews drew on this metaphor: “What the system’s trying to do is it’s dying and it’s trying to eat. It is trying to take in as much moisture as it can to survive.” (0334 CDT 27 August 2017). The meteorologists made the monster metaphor explicit by stating, “We’re dealing with a monster” (0512 CDT 27 August 2017, Matthews) and describing Harvey as a “beast” of an event (1214 CDT 26 August 2017, Craft).

The meteorologists also described Harvey as a stubborn monster, insistent on staying in place and continuing to feed with no remorse for the people in its path. Paul explained that the “parent storm doesn’t want to move, but it has so much energy with it that it just continues to feed these bands of rain and they just do not want to stop” (2326 CDT 26 August 2017). Garner further noted that “this is not showing any signs of quitting” (0035 CDT 27 August 2017) and that “psychologically there’s no mercy in storms” (2341 CDT 26 August 2017).

HARVEY AS A MACHINE. The KHOU meteorologists also compared Harvey to a machine. This comparison took two forms—Harvey as a battery and Harvey as an engine. The Harvey as a battery framework involved descriptions of Harvey as “constantly being recharged with fresh moisture off the Gulf of Mexico, feeding into the system” (2300 CDT 26 August 2017, Paul). Paul earlier explained that “because of the way the atmosphere is set up ... the atmosphere just does not stabilize. It just recharges instantly” (2251 CDT 26 August 2017). This depiction

is similar to the description of Harvey as a monster and demonstrates how these figurative frameworks interacted.

The Harvey as an engine framework was more developed. Garner described Harvey as a “heat engine” that was “like a lawnmower engine but instead of internal combustion it gets its fuel from warm water” (2341 CDT 26 August 2017). If Harvey was the engine, then individual storms were the spark plugs, given their tendency to “pop up” (1255 CDT 26 August 2017, Craft), “explode” (1130 CDT 26 August 2017, Craft), and “blow up” (0214 CDT 27 August 2017, Garner). The combustion of the storms ignited an “up and down motion” (2135 CDT 26 August 2017, Paul), similar to the role pistons play.

As Harvey’s forward motion came to a near halt, the KHOU broadcasters described Harvey as “stalled” (used 18 times) and “put in park with the engines revving” (0718 CDT 27 August 2017, Paul). The engine metaphor interacted with the “stubborn monster” metaphor to provide explanations for why Harvey would not move. For instance, Garner compared Harvey to a lawnmower running out of gas: “It’s like if your lawnmower runs out of gas and starts choking and it’s going to try and stay alive and it’s pulling in all this deep tropical moisture from the Gulf to wrap into its center to try and maintain its heat engine and that’s what we’re under and that’s where we’re getting all this rain” (0157 CDT 27 August 2017).

FIGURATIVE DESCRIPTIONS OF HARVEY’S HEAVY RAIN THREAT. In addition to the broader figurative frameworks of Harvey as a whole, the KHOU broadcast meteorologists also used figurative language to make sense of Harvey’s heavy rain threat. For instance, Garner explained how the prevailing atmospheric conditions acted to “wring out that wet washcloth” (0141 CDT 27 August 2017). Other everyday objects and experiences were used to describe the rainfall. For example, the meteorologists described how heavy rain arrived in “sheets” (used 6 times), “batches” (5 times), and “waves” (13 times). With each successive batch of rain, a new “layer” of accumulation was tacked on. The rain ran off into the streets, which became “rivers” and “lakes.” The rain saturated the ground, which Garner described as “like pudding putty, Jell-O” (0035 CDT 27 August 2017).

FIGURATIVE DESCRIPTIONS OF HARVEY’S DYNAMICS. To underscore the threat posed by Harvey, the meteorologists relied on metaphors that explained Harvey’s complex meteorological dynamics. For instance, the KHOU meteorologists frequently (30 times) referred to the “dirty side” of the storm to allude to the right-front quadrant of the storm “where all the flooding threat is” (1830 CDT 26 August 2017, Paul). Alternatively, those on the “clean side” to the west of the circulation were spared from the flooding rains. The KHOU meteorologists also attempted to explain the vertical structure of Hurricane Harvey by comparing it to “a cake, like a big, tall wedding cake and it’s like kind of tipped over like the Leaning Tower of Pisa” (0230 CDT 27 August 2017, Garner). Matthews also asked viewers to “think of [Harvey] like a cake” in order to explain the “stacked” nature of the low-level, midlevel, and upper-level circulations (0826 CDT 27 August 2017).

FIGURATIVE DESCRIPTIONS OF HARVEY’S IMPACT. In addition to explanations of Harvey’s threat and dynamics, the meteorologists also used figurative language to describe Houston as the unfortunate victim of Harvey’s physical violence. The Brays and Sims Bayou watersheds were “hit hard” (2116 CDT 26 August 2017, Paul), the west side of town got “slammed” (1114 CDT 26 August 2017, Craft), and downtown was “hammered” with heavy rain (2125 CDT 26 August 2017, Paul). These continual blows left the Houston area “literally paralyzed” (0648 CDT 27 August 2017, Paul).

Harvey’s impact was framed as simply a case of bad luck. Matthews referred to the recipients of heavy rain as the “unlucky bullseye” (0756 CDT 27 August 2017), while Paul summarized Harvey as “extraordinarily unfortunate and it is just a piece of bad luck that this weather

pattern developed at the time when this storm made landfall. It's just literally a bad deal" (0606 CDT 27 August 2017).

Intense language to communicate risk. During Hurricane Harvey, KHOU meteorologists communicated risk information through the use of intense language. This intense language took several forms, including descriptions of Harvey's impact as dire, life-threatening, unbelievable, and incredible; comparisons to historical threats; and the use of personal expressions of concern and disbelief. Intense language allowed the meteorologists to emphasize the risk posed by Harvey, to offer advice, and to emotionally connect with their viewers.

INTENSE DESCRIPTIONS OF RISK. Perhaps the simplest way the KHOU meteorologists intensified their language was through concerning descriptions of Harvey's risk, such as "scary" (mentioned twice), "life-threatening" (11 times), "emergency" (44 times), "catastrophic" (19 times), and "dire" (10 times). Before heavy rain began falling, the meteorologists attached these modifiers to hypothetical forecast scenarios. For instance, Craft urged viewers to keep their guards up, even as rainfall diminished, stating "I cannot stress that enough that this is going to be a really dire, critical situation as we head into the beginning of next week" (0745 CDT 26 August 2017). Paul described the rainfall forecasts as "disturbing" (2312 CDT 26 August 2017).

As the storm began to wreak havoc on Houston, the meteorologists used these intense modifiers to amplify their increasingly dire advice. The most powerful advice came from Garner, who was responding to the "horrible situation" (0130 CDT 27 August 2017) in which some Houston residents were forced to take refuge in their attics. Garner noted that an attic could turn into a "coffin corner if your home continues to flood" (0311 CDT 27 August 2017) and advised viewers to take an axe with them so they could cut themselves out. Garner mentioned on air that this advice was so "dire" that he "literally cleared it with our news managers" (0130 CDT 27 August 2017), one of the few instances where the meteorologists strayed from the unscripted nature of live coverage.

In some instances, the KHOU meteorologists struggled to find words to describe Harvey's threat and impact, instead relying on disbelieving terms like "incredible" (28 times), "tremendous" (19 times), "crazy" (3 times), and "unbelievable" (4 times). Prior to the start of heavy rain in Houston, Craft warned viewers of the "absolutely incredible amounts of rain still expected" (1327 CDT 26 August 2017), while Paul pointed out the "possibility of a tremendous flood here in Houston" (2116 CDT 26 August 2017). As the rain poured down, Paul noted the "tremendous amount of heavy, heavy rain" (2201 CDT 26 August 2017) over the area and Garner remarked that "we've got amazing amounts of water coming down Buffalo Bayou" (0243 CDT 27 August 2017).

COMPARISONS BETWEEN EVENTS. Another way the broadcasters communicated risk was through comparisons to historic flooding disasters in the Houston area, such as Tropical Storm Allison in 2001, the Memorial Day floods of 2015, and the Tax Day floods of 2016. Paul noted that Harvey would be different from these previous events because "this is forecast to stay rainy, not just for one big, long night, but we may do this again the next couple of nights as well" (2254 CDT 26 August 2017).

As the storm's threat progressed, comparisons stopped being hypothetical. For example, Garner reported that "we're at our Tax Day flood levels in Meyerland as the Brays Bayou continues to slowly rise" (0251 CDT 27 August 2017). Later, Matthews described Harvey as "Allison 2.0 taking place across the Houston area" (0332 CDT 27 August 2017). Paul even compared Harvey to a December 1935 flood that served as the benchmark flooding event in Houston prior to Tropical Storm Allison (*Houston Chronicle*, 28 May 2015). Paul described the 1935 flood as "the last time that we had a catastrophic flood that literally swept families away, down Buffalo Bayou, through downtown and into the Gulf of Mexico" (0718 CDT 27 August 2017).

Eventually, these comparisons became obsolete as the flooding exceeded all precedent. Garner described the storm as “obviously historic” (0139 CDT 27 August 2017) and something “you can tell your kids about” (0214 CDT 27 August 2017). Garner even compared Harvey to 2005’s Hurricane Katrina, noting that the rapid flooding in Houston reminded him of “when the Lower Ninth Ward experienced ... a rapid flooding” (0251 CDT 27 August 2017). Reporting from their makeshift studio, Matthews remarked that Harvey “certainly makes Allison look like child’s play” (0830 CDT 27 August 2017).

PERSONAL EXPRESSIONS OF DISBELIEF AND CONCERN. Perhaps the most powerful way the meteorologists intensified their language was through personal expressions of intense disbelief as the storm exceeded the broadcasters’ previous experience. Some of this disbelief was directed at observations of the event unfolding around them. For instance, Garner said he would have assumed that reported rainfall totals were “exaggerated” if they were not “coming from a trained spotter” (2306 CDT 26 August 2017). Garner even doubted his own forecast, noting that 30 additional inches (1 in. = 2.54 cm) of rain does not “sound so crazy anymore” (0033 CDT 27 August 2017). In some cases, disbelief was expressed retrospectively. For example, Matthews stated that “sometimes we see weird things come across the computers on a normal day and we’ll see some odd numbers. 10, 12, 13 inches. You say, well I can’t say that on TV” (0420 CDT 27 August 2017).

The meteorologists often expressed disbelief in reference to their previous experience. For instance, Paul stated, “It’s hard to get your head around something like this because I haven’t experienced this before” (2301 CDT 26 August 2017), later going so far as to note that he had never seen a forecast “like this since I’ve been here at KHOU” (2254 CDT 26 August 2017). Paul also remarked that he could not “remember ever seeing in this area a forecast for a tropical system to sit in a position to our west where it would just do this to us” (2332 CDT 26 August 2017).

At times, the meteorologists seemed shocked at their role in the historic event. Paul described Harvey as “something you read about in textbooks that can happen and now we’re going to watch it happen in real life in front of us” (2357 CDT 26 August 2017). Matthews expressed disbelief about the dire advice he was offering, stating, “They’re saying get on top of the roof, which I can’t believe I’m saying that” (0552 CDT 27 August 2017). Matthews described this feeling most succinctly when flood waters began to enter the studio, stating, “There are certain things in life you think you’ll never see. And then here it is. It’s happening right now” (0628 CDT 27 August 2017).

Toward the end of the broadcast, the meteorologists attempted to connect with their viewers by expressing concern for their community. Matthews made the threat personal during a dialogue with Paul, stating, “You know, I grew up here. This is my home. I’m one of you. You know I’m as concerned as you are about my city and I’m sure you are as well” (0629 CDT 27 August 2017). Paul responded that “we’re entering into some very tough times here” (0629 CDT 27 August 2017), although he did attempt to instill some hope by repeatedly stating that “we’re going to get through this” (0602 and 0628 CDT 27 August 2017).

Discussion and implications

This study used an inductive thematic analysis to understand how television broadcast meteorologists communicate risk and science during disasters. These results indicate that broadcast meteorologists in Houston made numerous language choices in order to communicate Harvey’s threat and impact, from framing Harvey as a monster to expressing their own personal feelings of disbelief as the storm raged on. This analysis provides a first step in understanding how broadcast meteorologists use figurative and intense language to communicate during high-impact weather events. Further, these findings demonstrate the power of language to help

those at risk make sense of complex events, and illuminate the multifaceted role broadcast meteorologists play during disasters.

First, these results highlight the power and versatility of language, especially figurative language, in describing weather disasters. Specifically, the KHOU broadcasters engaged in two types of figurative language, both intended to help the audience understand the dynamics and underlying nature of this catastrophic event. The first approach relied on specific metaphors, like comparing Harvey's vertical structure to a wedding cake. The broadcasters used these figurative approaches in an attempt to transfer their atmospheric understanding to their viewers by comparing meteorological phenomena to more readily understood phenomena (Lakoff and Johnson 1980).

However, the broadcasters also employed broader frameworks to explain Harvey as a whole. For example, the meteorologists framed Harvey as a monster or as a machine, offering the audience a simple way to make sense of a complex event. These broad frameworks were often connected to smaller-scale frameworks. By drawing attention to the bands of rain that were quelling the Harvey monster's appetite, for instance, the meteorologists translated between spatial scales, offering viewers a way to understand how their local experiences were connected to Harvey and the underlying dynamics responsible for its evolution. By using figurative language to help viewers make sense of the storm, the meteorologists fulfilled the "storyteller" role that broadcast meteorologists often play during hurricanes (Demuth et al. 2012, p. 1136). They were able to weave these explanations together with contextual information from their community in an unscripted, "off-the-cuff" live broadcast environment.

The broadcaster's use of intense language, while less obvious, also represents an effort to help the audience make sense of the storm. For instance, descriptions of Harvey's impact as "life-threatening" and "catastrophic" clearly signaled the increasing severity of the situation. Comparisons to previous events operate in a similar way by allowing users to compare Harvey to their previous hurricane and flooding experiences. Research indicates that reflections on previous disasters are common when faced with a potential disaster (Bica et al. 2019), and these reflections can influence decision-making (Demuth et al. 2016).

These results also emphasize the many challenges broadcast meteorologists face during high-impact weather disasters. One challenge is coming up with explanations and descriptions that are locally relevant. For instance, Garner took into account the "mowing culture" of the Houston area when crafting the lawnmower metaphor (B. Garner 2019, personal communication). Garner also explained that the "coffin corner" advice was given following a report of a family that had died as a result of taking refuge in their attic (B. Garner 2019, personal communication), which shows how language choices were often shaped by stories from the Houston community.

The meteorologists were also challenged by the storm itself, as Harvey outstripped the meteorologists' previous experience and impacted them personally. As such, the broadcasters may have experienced a "cosmology episode," defined by Weick (1993) as a situation in which individuals "suddenly and deeply feel that the universe is no longer a rational, orderly system" (p. 663). Thus, it is unsurprising that they increasingly expressed feelings of shock, awe, and doubt as the flood worsened and began to impact them personally. Not only were they responsible for providing and translating information to their viewers, but they also had to navigate their own personal emotions as they did so.

Limitations and future directions. These results cannot provide predictive claims regarding the effectiveness of these language choices. However, literature on fear appeals suggests that some of these choices could be more successful than others. For instance, the "Harvey as a monster" frame may have been effective at heightening risk perceptions given that it framed

Harvey as uncontrollable and catastrophic (Slovic 1987). Meanwhile, the “coffin corner” warning may have backfired if viewers felt they did not have the ability to cut themselves out of their attics (Witte 1992). Future research should test the potential strategies identified in this study to understand how specific language choices impact individual risk perceptions and behavioral intentions.

If certain choices are shown to be successful, they could be added to a lexicon of rhetorical language in broadcast meteorology. This would provide meteorologists across the weather enterprise a toolkit of language strategies and instructions on which strategies are suitable for specific contexts. Instructional material for current and aspiring meteorologists could use this lexicon in order to encourage language consistency among broadcast, government, and private meteorologist communicators. In doing so, meteorologists from all sectors would be better equipped to provide life-saving information in ways that their audience will understand.

Another limitation of this study is its focus on one Houston broadcast station. Given the wide range of threats and impacts posed by Harvey along the Gulf Coast, it stands to reason that broadcast meteorologists in other markets may have interpreted and communicated about Harvey in different ways. Future studies may want to perform cross-cut analyses from different geographic areas on multiple platforms (television broadcast, social media, NWS Chat) in order to understand how figurative and intense language choices perpetuate throughout the hurricane information system.

This study utilized an inductive thematic analysis to understand how broadcast meteorologists communicated risk and science during a high-impact weather event. The results underscore the dynamic and multifaceted role broadcasters play, as risk communicators emphasizing Harvey’s threat, as science communicators explaining Harvey’s underlying dynamics, and as human beings coping with catastrophe.

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