Weatherfluencers

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Abstract

As digital platforms reshape the time-sensitive news information consumption landscape, novel intermediaries have emerged to interpret complex data for public audiences. Weather livestreamers represent a compelling example of this transformation in weather news coverage. Through their real-time interpretation of radar data, these creators cultivate substantial followings by translating official National Weather Service data, radar imagery, and weather alerts into accessible formats while building audience rapport. This paper introduces the concept of weatherfluencers as a distinct subset of newsfluencers and examines their roles, practices, and obligations to their communities and the broader public. We explore how their activities illuminate key challenges and opportunities in designing platforms that support real-time collaboration around weather events. Additionally, we contextualize these developments within broader policy shifts, including proposals to reduce National Weather Service funding and privatize weather operations. This potential privatization creates urgent questions for HCI researchers about how to design platforms and systems that support critical weather information dissemination in an increasingly fragmented landscape. This research agenda underscores the importance of understanding weather information intermediaries as crucial actors in the evolving landscape of news creation, particularly as we face potential changes in institutional weather services.

CCS Concepts

• **Human-centered computing → Collaborative and social computing theory, concepts and paradigms**.

Keywords

influencers, news, crisis informatics, weather

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1 Introduction

As digital platforms continue to shape how people seek and consume time-sensitive information such as breaking news, new intermediaries are emerging to help interpret complex data for public audiences. Weather livestreamers represent a compelling example of transformations and reconfigurations in a subset of news: weather coverage. Through their near play-by-play explanation of live radar data, these creators attract large followings by providing real-time interpretation of weather data, radar imagery, and official watches and warnings released by the National Weather Service. Much like emerging patterns we see in newsfluencers, these livestreamers help fill information gaps, translating detailed and specialized knowledge into accessible formats while building rapport with their audiences. This workshop paper defines weatherfluencers as a distinct subtype of newsfluencer. Through this conceptualization, we examine their activities and their obligations to both their communities and the greater public. we highlight how their practices illuminate key challenges and opportunities in designing platforms that support real-time collaboration surrounding weather events. Additionally, we situate one workshop theme, reconfigurations, within the broader agenda of the Trump administration and Project 2025, which seeks to diminish capital in the National Weather Service and privatize most weather operations. Above all, we should work to understand weather information intermediaries as news creators especially as we face potential degradation in institutional weather services.

2 Who Are the Weatherfluencers?

Coverage of local and national weather has historically been a core component of TV news operations. Whether the forecast calls for sunny skies or extreme severe weather, TV meteorologists have long been revered for their personalities, maintaining a reassuring demeanor in the face of crisis, and of course, their accuracy even as conditions change by the minute. TV meteorologists sometimes break out into pop culture, becoming phenoms like Jim Cantore of the Weather Channel who became internet famous for his reaction to thundersnow during the 2015 Winter Storm Neptune. Although we may not typically consider weather news, weather communication shares key challenges with "regular" news: the need for accuracy and timeliness, the translation of complex data for public consumption, and implications for public safety.

In recent years, advancements in live streaming platforms, satellite and GPS technology, along with the democratization of radar and weather forecasting applications have allowed seasoned meteorologists and amateur storm chasers alike to participate in telling the weather outside of traditional TV media outlets. Creators have begun deriving forecasts for upcoming storms based on National Weather Service outputs. Meteorologists at reputable public and private agencies also post prediction videos and light public service announcements about upcoming hurricanes, winter storms, and tornado outbreaks across visual platforms, in particular. Seasoned storm chasers, photographers, and videographers document and discuss recent, and often powerful weather. And some creators take their interests into the real-time. This paper is primarily about

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extreme weather livestreamers. YouTube and TikTok play host to many "extreme weather content creators" who provide play-by-play interpretations of ongoing weather events, often involving dangerous storm systems like tornadoes and hurricanes. These creators harness the power of National Weather Service alerts to deliver important real-time watches and warnings. One creator, in a recent livestream on a tornado outbreak, attracted nearly 9,000 simultaneous viewers and also collected money for relief efforts [21]. These creators often engage the help of the live chat community, who gather for various reasons: to understand if they are in the path of a storm, to simply learn more about meteorology, and sometimes, just to experience the awe of watching a tornado form live on radar. The participatory and voyeuristic aspect of these livestreams closely resembles that of early participatory journalistic tools such as Periscope and presently, Citizen.

These weatherfluencers do not operate without controversy. The trust and credibility of weatherfluencers is sometimes called into question. Similarly to newsfluencers, weatherfluencers may not be degreed in meteorology nor have taken an NWS SkyWarn Storm class, a program that trains volunteer severe weather observers. Any "related" program is enough to get your foot in the door. There is no official "stamp of approval" from the National Weather Service to operate such livestreams. There are also ethical considerations, especially when dealing with storm chasers on the ground. Some creators have faced criticism for continuing to feature storm chasers who operate vehicles unsafely during storm conditions. Lastly, is it ethical to monetize such streams and if so, how?

The growth of such weatherfluencer personalities and communities is an important development in the context of news, information, platforms, and their capabilities. As of 2023, most Americans get their weather news from weather apps (53%) and TV stations (43%) and are less likely to get it from social media. The accuracy of social media-derived weather information is thought of as somewhat accurate at best [16]. However, these statistics alone do not explain the growth or role of weatherfluencers in the weather coverage landscape, especially in recent years. The information density and continuous coverage provided by weatherfluencers exceed the capabilities of traditional TV news formats. Weatherfluencers seamlessly integrate multiple data sources, transitioning between radar data, live ground-level storm chaser footage, and expert meteorological commentary. Weatherfluencers are often streaming not just for a particular area, but for the length of an entire storm system across multiple states – sometimes for up to 8 hours at a time.

Weatherfluencers are an understudied, under-theorized phenomenon that can help us understand broader patterns of engagement with how digital platforms enable real-time communication of life-saving information, non-traditional actors as trusted information intermediaries, the build-up of community around such content creators, and how detailed and specialized information gets translated from jargon to actionable information for the general public. Weatherfluencers, like newsfluencers, represent new reconfigurations of news-telling actors. The enablement of live chat represents a reconfiguration of activity; live chat participants often ask questions and provide detailed new information to the creator about local conditions. Because these creators are generally reliable, generally trusted in the larger weather community, and engage with their audiences, communities, and parasocial relationships have been built around them, as evidenced by private discord channels and subreddits and debates about who is best to follow for what type of weather condition.

For this short paper, we will refer to weatherfluencers specifically in regards to creators who livestream severe weather events. This focus allows us to examine how these creators exemplify key theoretical concepts from digital journalism and influencer studies. Like the "post-industrial" journalists described by Anderson et al. [2], weatherfluencers operate in an environment marked by freedom from traditional institutional constraints. Their practices align with Hurcombe's newsfluencer description [10], as they act as intermediaries between complex data and public audiences. Furthermore, they demonstrate characteristics of both traditional influencers [1, 7] through their cultivation of authentic personas and engaged communities, while simultaneously fulfilling vital public information needs in ways that echo traditional journalism's public service role. This positioning at the intersection of influencer culture and public safety information creates unique tensions that warrant deeper theoretical examination.

2.1 Theoretical Background

2.1.1 Digital Journalism. The rise of digital journalism via the Internet can be traced back to the mid-1990s. Early digital journalism was marked by "ubiquitous news, global information access, instantaneous reporting, interactivity, multimedia content, and extreme content customization" [19]. Boczkowski argued that "new media emerge by merging existing social and material infrastructures with novel technical capabilities" [5]. This transition from the physical to the digital exacerbated declining trends in traditional print journalism and impacted the political-economic structure of the industry [23]. Anderson et al. called this transition the "post-industrial" phase of journalism, which is marked by incoherence and an abundance of freedom by news organizations [2]. This shift led McChesney and Pickard to warn that "the existing new media system is in collapse, and something is going to replace it" [15]. Indeed, The Platform Press [4]report outlined a phenomenon where news organizations have become increasingly dependent on tech and social media platforms for distribution and revenue, fundamentally altering their business models. Recent work by Lewis and Molyneux [12] reflects upon the biases and faulty assumptions in this field of study, particularly that 1) social media would be a net positive for the journalism world 2) that social media accurately reflects reality, and 3) that social media ranks above other factors and established institutions.

The transformation of news consumption patterns has been dramatic, brought on in part by the design of social media platforms. Thorson and Wells [26] describe a "curated flows" framework to analyze news consumption patterns where algorithms and social connections, rather than professional editors, increasingly determine news exposure. They argued that "from the perspective of an individual's personal communication network, comparable processes of "curation" are undertaken by a variety of actors, not only conventional newsmakers but also individual media users, social contacts, advertisers, and computer algorithms" [26]. Hermida conceptualized "ambient news" in the context of Twitter/X as "para-journalism forms such as micro-blogging as 'awareness systems'

that provide journalists with more complex ways of understanding and reporting on the subtleties of public communication" [8]. "News snacking" has also been used to describe "the brief, intermittent attendance to news in mainly digital and mobile media contexts" [18]. Newman [17] documented how younger generations are abandoning traditional television news in favor of social media platforms, which have a variety of affordances that affect how news is curated by traditional media outlets and how it is received by viewers. These trends demonstrate that news media both offline and offline are undergoing significant changes and that the impact of changing business models along with platform affordances directly affects how, when, and where consumers receive their news. These changes in news and platform dynamics also create information and analysis voids, which have been exploited by regular users of platforms. In the next section, we will briefly discuss the concept of influencers, who arrive on the social media scene during a time of intense change for media institutions and platforms alike.

2.1.2 Data Journalism. Data journalism emerged as a distinctive practice in the 2000s, combining traditional journalistic values with computational methods to analyze, visualize, and communicate complex information to lay audiences. As Ausserhofer et al. [3] argue, it evolved through the convergence of computer-assisted reporting, investigative journalism, and open data movements, with particularly explosive growth following high-profile collaborations like the Panama Papers. Data journalism is characterized by its emphasis on quantitative evidence and visualization techniques to enhance storytelling and transparency [28]. During crisis events like the COVID-19 pandemic, data journalists played a crucial role in translating complex scientific information into accessible formats, though this work highlighted persistent challenges in accuracy, context, and uncertainty communication [20]. The field continues to evolve as practitioners navigate tensions between journalistic norms and computational methods, with ongoing debates about how data visualization practices can either clarify or potentially mislead audiences depending on design and contextual framing [13, 25, 27].

2.1.3 Influencers. The evolution of social media influencers spans over two decades, beginning with early fashion and lifestyle blogs, and following through to live streamers, Instagrammers, and now today's TikTok stars of various topics, monetization strategies, and content delivery styles. In 1955, Katz and Lazarsfeld developed a concept of "personal influence" from which the modern term influencers is derived [11]. Circa 2008, microcelebrity began to be used to describe those who accumulated followings on their personal blogs [24]. Abidin built upon these definitions, describing influencers as "a contemporary incarnation of Internet celebrity for whom microcelebrity is not merely a hobby or a supplementary income but an established career with its ecology and economy" [1]. Duffy described influencers as "social media influencers are a subset of digital content creators defined by their significant online following, distinctive brand persona, and patterned relationships with commercial sponsors" [7]. Their appeal is also derived from their ability to maintain some semblance of authenticity with their followers [7, 9]. De Veirman et al. [6] explored the authenticity of influencers and found that perceived authenticity and parasocial relationships were key to influencer impact. Additionally, Lou and Yuan [14] further identified that informative value and trustworthiness were crucial factors in followers' trust in influencer-generated content. A common thread within definitions of the term influencer has been along the axis of commercialism. Influencers are often discussed concerning their self-branding efforts, the wider "hustle culture" of maintaining a social media presence, and the ability to weave sponsored product ads directly into their content without sacrificing the tone or their brand [9]. The influencer industry has pushed billions of dollars into the social media economy, commodifying authenticity and reshaping notions of trust and influence [9]. Despite this, the influencer ecosystem is marked by disparities across gender, ethnicity, class, and aesthetics, challenging notions of social media being more democratic than traditional media [7].

2.1.4 Newsfluencers. At the intersection of digital journalism, influencers, and social media platforms are newsfluencers. Schapals [22] conceptualized "peripheral actors" in journalism and argued that "despite the perceived role of peripheral actors as "deviant", they still demonstrate a surprising degree of ideological continuity in the face of industrial disruption." Hurcombe conceptualized newsfluencers as creators who utilize the "economic and cultural logics of online influencers to produce news content for participatory audiences" [10]. Like newsfluencers, weatherfluencers operate similarly; we can easily extend Hurcombe's definition to specific types of creators who carry out the duties of influencers to the topic of extreme weather, with some slight variation. Hurcombe analyzed the newsfluencer along several dimensions: culture (fandom & parasocial), labor (self-branded, passionate, and relational), and business models (subscriber-led, insecure, and entrepreneurial). Generally, weatherfluencers also operate on the axis of culture in that they accrue fandoms as evidenced by associative private discord channels and also develop parasocial or near-parasocial relationships with fans through their livestreaming and via other channels such as Twitter/X by acknowledging inside jokes, memes, and addressing the fanbase. Weatherfluencers also operate on an axis of labor. Some of these creators are self-branded while others are more-or-less a collective of individuals providing severe weather coverage. Perhaps all would be considered passionate about what they do, not just because the content is genuinely interesting but also because there is a salient interest in public safety. Additionally, business models may vary widely. Some weatherfluencers are led by subscribers, with some portion of proceeds going toward severe storm relief efforts while other models remain unclear.

2.2 A Research Agenda

We argue that weatherfluencers represent the culmination of several structural changes at the intersection of digital journalism, data journalism, influence, creatorship, and platformed information. Weatherfluencers represent the need for detailed weather news that traditional media can no longer provide as younger generations unplug from TV news media and the need to meet people impacted by severe weather where they are, which is likely just clicks away from YouTube or social media. They also represent the want for such information by attracting sets of viewers who are not just there to get critical information but may hang around for a sense of community and as a way to learn more about the weather. On

the part of the weatherfluencers themselves, the role may represent several ongoing trends: the ease of becoming a content creator, the information gap on the part of traditional media, and the sharing of content that simply isn't seen as often on social media and is interesting to a subset of platform users. Complicating this intersection is something that is not directly covered by the concept of newsfluencers: the essential role that weatherfluencers play in the dissemination of safety-critical information and how this impacts how creators make money. This represents a shift away from the idea that influencers are simply there to carve out a space for monetization. However, little is known about the monetary structures of weatherfluencers or exactly how much money is made from livestreaming extreme weather events. It is not clear that the intent is to sell products, though there is evidence that productized gifts are provided to subscribers. Additionally, both platforms may incentivize dramatic, exciting content, complicating the distinction between what information is critical and what may just be hype to build viewership. Lastly, with the changes in NOAA/NWS brought on by the Trump administration and loosely by Project 2025, which argue that privatizing data collection and analyses on the weather and its dissemination is a worthwhile cost-saving measure and traditional government meteorology jobs should be cut to make way for this change. This leaves an even larger gap for weatherfluencers to maintain a foothold in the online world.

Drawing from the theoretical frames discussed above and motivated by the potential privatization of now government-funded weather services and the information void this may cause, We propose a research agenda examining five interconnected areas critical to understanding weatherfluencers in the context of digital journalism, influence, and HCI. These areas address key challenges in platform design, community dynamics, social media algorithms, and information access that are central to HCI research. These areas emerge from our analysis of weatherfluencers' current practices and the theoretical frameworks of digital journalism, influencer studies, and newsfluencers.

2.2.1 Theoretical Considerations: Weatherfluencers as Knowledge Producers and Sensemakers. Building on Hurcombe's conceptualization of newsfluencers, we must establish a comprehensive theoretical foundation that accounts for weatherfluencers' unique role in crisis communication, real-time knowledge production, and sensemaking. While weatherfluencers share certain characteristics with newsfluencers, operating along axes of culture, labor, and platformized business models, they differ in fundamental ways that current theoretical frameworks do not address. We propose four key research questions to guide future inquiry into the theoretical dimensions of weatherfluencers.

RQ1: How do weatherfluencers differ from traditional newsfluencers in their knowledge production and sensemaking practices? Unlike newsfluencers who primarily repackage existing news with commentary, weatherfluencers actively interpret raw meteorological data in real-time, generating original insights through their analysis. These creators will often have to make split-second decisions about what to vocalize for their followers and what information is communicated in other ways. This positions them closer to data journalists than traditional newsfluencers, particularly in their translation of complex scientific information into more accessible formats. This parallel with data journalism during the COVID-19 pandemic warrants further exploration, as both contexts involve interpreting specialized information during high-stakes scenarios where public understanding directly impacts safety outcomes.

Weatherfluencers also engage in active sensemaking processes, transforming abstract meteorological data into meaningful narratives and actionable safety information. Unlike much news content where sensemaking occurs before and after a journalistic headline is written, weatherfluencers make sense of evolving situations as they unfold, helping audiences understand not just what is happening, but how those events may affect them personally. They utilize their past experiences with storm data and reporting to guide current analysis, attempting to predict, reasonably, the near future. The real-time collective sensemaking process involves both the weatherfluencer and their community members collaboratively constructing an understanding of complex, rapidly changing weather phenomena.

RQ2: In what ways do weatherfluencers bridge crisis informatics, participatory media, and data journalism? Weatherfluencers operate at this unique intersection of crisis informatics, participatory media, and data journalism, combining elements of each domain that no existing theoretical framework fully captures. Weatherfluencers operate in a unique space between public institutions such as the National Weather Service, technical data interpretation ("expertise"), community knowledge, and public communication. Like newsfluencers, they also cultivate parasocial relationships and fandoms. While the field of crisis informatics has examined official emergency communication and citizen reporting, the hybrid role of weatherfluencers as consistent, dedicated crisis communicators with participatory audiences represents a novel configuration requiring theoretical innovation. However, their positioning creates unique dynamics in several key ways:

First, weatherfluencers serve as translators between institutional data sources and public understanding. While the National Weather Service provides raw data and official alerts, weatherfluencers transform this information into accessible, real-time narratives that help viewers understand immediate dangers and broader weather patterns. This translational role extends beyond simple interpretation to include spatial and temporal contextualization that helps viewers understand their personal risk levels.

Second, weatherfluencers bridge formal and informal knowledge systems. They combine official meteorological data with on-the-ground reports from community members and storm chasers, creating a hybrid form of expertise that neither traditional weather institutions nor casual observers can provide alone.

Third, as weather information potentially shifts towards privatization, weatherfluencers may evolve from peripheral players to crucial institutional alternatives. This transition would position them very differently from typical newsfluencers. Rather than primarily disrupting or interrupting information flows, they may become essential infrastructure for weather communication, particularly in areas where traditional weather coverage is limited or where platform-native information delivery is preferred. This potential shift from supplementary to essential information providers raises important questions about platform design, information access, and the future of weather communication systems.

RQ3: What temporal or "reactive" dimensions distinguish weatherfluencers from newsfluencers? The temporal dimension represents one of the most significant distinctions between weatherfluencers and traditional newsfluencers. Weatherfluencers actively interpret meteorological data in real-time, making split-second decisions about what information to prioritize and how to contextualize it for viewers. During storm lulls, they explain the meteorological process that created current conditions and use this analysis to predict future weather states.

This predictive element distinguishes weatherfluencers from most newsfluencers, who typically focus on reporting events that have already occurred. Weatherfluencers operate across temporal planes simultaneously: they analyze past weather patterns, interpret present conditions, and predict future developments all while communicating uncertainty and risk. This temporal flexibility is crucial to the sensemaking process, and it allows audiences to understand not just the current conditions, but how those conditions could play out and where they might lead. A specific example appears during radar update intervals, where the newsfluencer draws in digital pen on the radar to show where a storm is headed. The next sweep of the radar then validates or requires adjustment of their predictions, creating a continuous cycle of prediction, validation, and sensemaking that involves both the creator and the audience.

From a content standpoint, weatherfluencers actively interpret meteorological data in real-time, making split-second decisions about what information to prioritize and how to contextualize it for viewers. During storm lulls, they explain the meteorological processes that created current conditions and use this analysis to predict future weather states. This predictive element distinguishes weatherfluencers from most newsfluencers, who typically focus on reporting or commenting on events that have already occurred, though some may add commentary on implications. Weatherfluencers generate the "now" and potential future state of storms, offering realistic hypothetical scenarios that enable viewers to make safety decisions before conditions deteriorate. A specific example of this dimension may be in the period between radar sweeps where the weatherfluencer draws on the radar to show where the storm is headed. The next sweep of the radar will show the degree of "correctness" in their predictions. While storm prediction is important, these hypothetical scenarios for storm tracks serve a higher purpose: better predictions and better accuracy save more lives.

RQ4: What are the tensions between Monetization, Engagement, and Safety? The business imperative of content creation creates unique tensions for weatherfluencers that differ from those faced by typical newsfluencers. Extreme weather events are seasonally dependent in North America, with tornadoes and hurricanes primarily occurring during the spring and summer months. Some weatherfluencers produce "retrospectives" that take into account updated reports from the National Weather Service or simply switch to winter weather coverage. This creates pressure during "off seasons" when weatherfluencers may be tempted to produce seasonal content when no major weather stories exist, potentially compromising credibility by over-hyping future predictions.

Additionally, some weatherfluencers operate on subscriber-based models with portions of proceeds sometimes directed toward severe weather relief efforts. This creates a different ethical framework than the typical lifestyle influencers or standard newsfluencers. The tension between platform incentives for engagement-maximizing content and ethical responsibility to provide accurate safety information creates a theoretical challenge not adequately addressed in current frameworks.

Institutional Transitions and Future Implications. As we examine these research questions, we need theoretical frameworks that account for at least three critical aspects of weatherfluencers: their hybrid role in crisis communication, their real-time knowledge production practices, and their function and role in collective sensemaking. Existing models of newsfluencers, data journalists, and crisis informatics don't fully capture how these creators balance entertainment with emergency information, nor how they generate rather than repackage knowledge. As weather services face disruption and potential privatization, we particularly need theories and frameworks that can help us understand how these actors might shift from peripheral to central players in weather communication ecosystems and how their sensemaking practices might become increasingly important to public safety.

2.2.2 Trust and Authority in Weather Information. How do weather livestreamers build, maintain, and expand their credibility? How do they gain the trust of regular netizens? The question of trust in weatherfluencer content builds directly on De Veirman et al.'s [6] research on influencer authenticity and Lou and Yuan's [14] findings about informative value in establishing credibility. Weatherfluencers are often operating without traditional institutional backing and must establish credibility through their practices and community relationships.

The trust relationship between weatherfluencers and their audiences parallels similar dynamics observed in data journalism during the COVID-19 pandemic. Just as pandemic data visualizers needed to establish credibility when interpreting complex epidemiological information for public consumption /citebisiani2025data, weatherfluencers face similar challenges in building trust around their interpretations of meteorological data. Both contexts involve the translation of specialized scientific information during high-stakes scenarios where public understanding directly impacts safety outcomes.

Furthermore, there are few indicators to determine whether or not a weatherfluencer is trustworthy. Regular TV meteorologists have the backing of large media organizations which presuppose a certain level of trust. While many of those meteorologists have advanced degrees in atmospheric sciences, weatherfluencers may be less upfront about their credentials. Trust may instead be earned through consistency and accuracy in forecasting, transparent presentation of data sources, appropriate level of hype involving safety warnings, and audience validation. This creates significant challenges for viewers attempting to distinguish between knowledgeable amateur enthusiasts, trained professionals operating independently, and opportunistic content creators capitalizing on extreme weather events with limited expertise.

Privatization of weather services may change the current dynamics dramatically, likely opening a void of information and an opportunity for more weatherfluencers to do their work. This leads to questions about how to validate such information across increasingly fragmented sources. The role of monetization in the

trust of these relationships requires special attention, as creators must balance accurate forecasting with attention-grabbing content and their obligation to provide a public service. Unlike lifestyle influencers described in Duffy's [7] work, weatherfluencers must balance entertainment value with potentially life-saving information delivery. This creates new tensions in how trust is established and maintained. When these dynamics intersect with the potential privatization of weather services, we must consider how the "post-industrial" journalism environment described by Anderson et al.[2] might affect information validation and authority in increasingly fragmented weather information landscapes.

2.2.3 Community Dynamics and Collective Sensemaking. We should seek to gain an understanding of the community dynamics that enabled the kind of collective sensemaking that occurs during severe weather events, particularly on livestreaming platforms such as YouTube and TikTok. Livestream communities are known for developing sophisticated strategies and practices for interpreting complex data and processes as well as interacting directly with the creator. Some community members may take on specialized roles such as moderators while others may be regular viewers, lurkers, or other 'hyper-local' roles. Some may take on an "information validation" role. Real-time ground observers, such as storm chasers, can provide temporally-relevant validation of radar data. Veteran community members may be able to reference recent or historical events to help other viewers understand potential storm behavior. These communities develop in the gap between traditional weather institutions and traditional media often leveraging parasocial relationships, engaging content, and explainer material to make the content more accessible and actionable for viewers. It would benefit both viewers and creators to understand these dynamics to leverage and strengthen the power of crowdwork.

Weatherfluencer communities exhibit interesting geographical dynamics that warrant further investigation. While some audiences engage primarily for local risk assessment during immediate threats, many viewers participate from well outside the affected areas. These may be termed "global weather voyeurs." These distant participants often contribute to collective sensemaking without personal safety concerns, creating interesting dynamics between local stakeholders seeking actionable information and global viewers with varying motivations including educational interest, entertainment, or vicarious experience. This geographic diversity raises important questions about how community dynamics shift based on proximity to dangers and how weatherfluencers balance serving highly-localized safety needs with engaging broader audiences. During major events, like hurricane landfills, these communities often spontaneously stratify into 'locals' providing ground-level observations and 'non-locals' contributing analytical perspectives or historical context, creating a rich, multi-layered collective intelligence system that deserves deeper study.

2.2.4 Platform Design Challenges. Current live streaming platforms present significant limitations for crisis communication, raising critical questions about their suitability for weather information dissemination. These platforms' architectural constraints affect several key aspects of weather communication.

From the creator perspective, weatherfluencers face substantial technological hurdles when trying to deliver safety-critical information. Current platforms were not designed for crisis communication and place the entire burden on a single person to manage multiple critical information streams simultaneously. Weatherfluencers must constantly shift between radar data, National Weather Service alerts, sometimes live chat moderation, and storm chaser footage all while maintaining engaging and educational commentary. The challenges they face mirror those encountered by data journalists in COVID-19 data dashboards /citebisiani2025data where design limitations affected how effectively complex information could be communicated to the general public. This creates cognitive overload during critical moments when precise information delivery is crucial. Specialized visualization interfaces are needed that would allow creators to integrate, organize, and prioritize diverse data sources during emergencies, replacing the multi-screen setups that weatherfluencers rely on.

From the viewer perspective, current platform interfaces make it difficult to distinguish new alerts, from ongoing alerts to expired alerts. Current visual designs mirror those of complex video games with busy user interfaces and information ecosystems such as World of Warcraft. It is also difficult to maintain focus on a single storm affecting subsets of the viewership. Viewers in affected areas need location-specific alerts prominently displayed, while educational viewers might prefer contextual meteorological information. Platform designs that could filter and personalize content based on viewer location and needs may significantly improve the viewer experience. Additionally, high-latency livestreaming creates potentially dangerous information delays when seconds matter for safety. Latency is commonly observed with the camera feeds from live storm chasers. Research from data journalism suggests that interactive visualization tools allowing users to personalize information based on their location could enhance comprehension of spatial risk, but such tools remain underdeveloped in livestreaming contexts.

Platform design constraints directly impact public understanding of safety-critical information. HCI researchers must consider how to create flexible, yet specialized visualization interfaces that support the real-time, multi-layered data presentation needs specific to weather crisis communication.

2.2.5 Power and Access Implications. Finally, we must examine power and access implications as weather information potentially shifts from a public service to a private commodity. Platform design priorities may change under privatization, creating new tensions between engagement metrics, credibility, and public safety needs. We need to understand how platforms can support creators through their user interface design but also through tools like moderation while maintaining access to safety-critical information. How can platforms become more supportive of this work? Who decides what crisis information violates platform policy? What design interventions might support more equitable access to both creators and viewers in an increasingly privatized landscape? This research area intersects with broader HCI concerns about platform governance, information equity, and the democratization of critical public safety information. Understanding these dynamics is essential for designing inclusive and effective weather communication systems.

3 Conclusion

Weatherfluencers are more than just people vying for the attention of the masses. Their reporting on ongoing extreme weather events is a growing and crucial piece of the news and crisis informatics puzzle. Livestreamers in particular deliver important, crucial, and many times educational content about extreme weather. In this workshop paper, we begin to carve out a definition of the weatherfluencer, built upon Hurcombe's conceptualization of the newsfluencer. We describe activities that the weatherfluencer would take on, such as live play-by-plays and explanations of radar data with the inclusion of the associated livestream community. We outline how their practices illuminate challenges for a platform and how we might bolster support for these types of livestreams and their communities. Lastly, we situate the conversation around weatherfluencers in the context of the Trump administration and Project 2025, which seeks to privatize many weather operations carried out by the National Weather Service, leaving a potential gap for weatherfluencers to flourish. This agenda calls for HCI research that examines whether livestreamers are not just as content creators, but as crucial intermediaries whose practices may become increasingly central to public safety.

References

[1] Crystal Abidin. 2017. #familygoals: Family Influencers, Calibrated Amateurism, and Justifying Young Digital Labor. *Social Media + Society* 3, 2 (April 2017), 2056305117707191. doi:10.1177/2056305117707191 Publisher: SAGE Publications Ltd.

[2] C.W. ANDERSON, EMILY BELL, and CLAY SHIRKY. 2015. POST-INDUSTRIAL JOURNALISM: ADAPTING TO THE PRESENT. *Geopolitics, History, and International Relations* 7, 2 (2015), 32–123. https://www.jstor.org/stable/26805941

[3] Julian Ausserhofer, Robert Gutounig, Michael Oppermann, Sarah Matiasek, and Eva Goldgruber. 2020. The datafication of data journalism scholarship: Focal points, methods, and research propositions for the investigation of data-intensive newswork. *Journalism* 21, 7 (2020), 950–973.

[4] Emily Bell, Taylor Owen, Pete Brown, Codi Hauka, and Nushin Rashidian. 2017. The platform press: How Silicon Valley reengineered journalism.

[5] Pablo J. Boczkowski. 2005. *Digitizing the News: Innovation in Online Newspapers.* MIT Press, Cambridge, Massachusetts, USA. Google-Books-ID: 2YPw9Ooxx70C.

[6] Marijke De Veirman, Veroline Cauberghe, and Liselot Hudders. 2017. Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude. *International Journal of Advertising* 36, 5 (Sept. 2017), 798–828. doi:10.1080/02650487.2017.1348035 Publisher: Routledge _eprint: https://doi.org/10.1080/02650487.2017.1348035.

[7] Brooke Duffy. 2020. *Social Media Influencers.* John Wiley and Sons, Inc, Hoboken, New Jersey, USA. 1–4 pages. doi:10.1002/9781119429128.iegmc219

[8] Alfred Hermida. 2010. Twittering the News: The emergence of ambient journalism. *Journalism Practice* 4, 3 (Aug. 2010), 297–308. doi:10.1080/17512781003640703 Publisher: Routledge _eprint: https://doi.org/10.1080/17512781003640703.

[9] Emily Hund. 2023. *The Influencer Industry: The Quest for Authenticity on Social Media.* Princeton University Press, Princeton, New Jersey, USA. Google-Books-ID: IuOCEAAAQBAJ.

[10] Edward Hurcombe. 2024. Conceptualising the "Newsfluencer": Intersecting Trajectories in Online Content Creation and Platformatised Journalism. *Digital Journalism* 0, 0 (2024), 1–12. doi:10.1080/21670811.2024.2397088 Publisher: Routledge _eprint: https://doi.org/10.1080/21670811.2024.2397088.

[11] Elihu Katz, Paul F. Lazarsfeld, and Elmo Roper. 2017. *Personal Influence: The Part Played by People in the Flow of Mass Communications.* Routledge, New York. doi:10.4324/9781315126234

[12] Seth C. Lewis and Logan Molyneux. 2018. A Decade of Research on Social Media and Journalism: Assumptions, Blind Spots, and a Way Forward. *Media and Communication* 6, 4 (Nov. 2018), 11–23. https://www.cogitatiopress.com/mediaandcommunication/article/view/1562

[13] Wiebke Loosen, Julius Reimer, and Fenja De Silva-Schmidt. 2020. Data-driven reporting: An on-going (r) evolution? An analysis of projects nominated for the Data Journalism Awards 2013–2016. *Journalism* 21, 9 (2020), 1246–1263.

[14] Chen Lou and Shupei Yuan. 2019. Influencer Marketing: How Message Value and Credibility Affect Consumer Trust of Branded Content on Social Media. *Journal of Interactive Advertising* 19, 1 (Jan. 2019), 58–73. doi:10.1080/15252019.2018.1533501 Publisher: Routledge _eprint: https://doi.org/10.1080/15252019.2018.1533501.

[15] Robert W. McChesney and Victor Pickard. 2010. *Will the Last Reporter Please Turn Out the Lights: The Collapse of Journalism and What Can Be Done to Fix It.* The New Press, New York, NY, USA. Google-Books-ID: WUI4AAAAQBAJ.

[16] Abby McVay and Taylor Orth. 2023. How often and where Americans get information on the weather | YouGov. https://today.yougov.com/health/articles/45672-how-and-where-americans-get-information-weather

[17] Nic Newman, Richard Fletcher, Craig T. Robertson, Amy Ross Arguedas, and Rasmus Kleis Nielsen. 2024. *Reuters Institute digital news report 2024.* Technical Report. Reuters Institute for the Study of Journalism. doi:10.60625/RISJ-VY6N-4V57

[18] Jakob Ohme and Cornelia Mothes. 2025. News snacking and political learning: changing opportunity structures of digital platform news use and political knowledge. *Journal of Information Technology & Politics* 22, 1 (Jan. 2025), 1–15. doi:10.1080/19331681.2023.2193579 Publisher: Routledge _eprint: https://doi.org/10.1080/19331681.2023.2193579.

[19] John V. Pavlik. 2001. Introduction: Understanding the Impact of New Media on Journalism. In *Journalism and New Media.* Columbia University Press, New York, NY, USA, xi–xviii. https://www.jstor.org/stable/10.7312/pavl11482.5

[20] Mildred F Perreault and Gregory P Perreault. 2021. Journalists on COVID-19 journalism: Communication ecology of pandemic reporting. *American behavioral scientist* 65, 7 (2021), 976–991.

[21] Ryan Hall, Y'all. 2025. The February 12, 2025 Severe Weather Coverage, As It Happened... https://www.youtube.com/watch?v=ZkiHfqTIvyk

[22] Aljosha Karim Schapals. 2022. *Peripheral Actors in Journalism: Deviating from the Norm?* Routledge, London. doi:10.4324/9781003144663

[23] Ben Scott. 2005. A Contemporary History of Digital Journalism. *Television & New Media* 6, 1 (Feb. 2005), 89–126. doi:10.1177/1527476403255824 Publisher: SAGE Publications.

[24] Theresa M. Senft. 2008. *Camgirls: Celebrity and Community in the Age of Social Networks.* Peter Lang, New York, NY, USA.

[25] Florian Stalph and Eddy Borges-Rey. 2018. Data journalism sustainability: An outlook on the future of data-driven reporting. *Digital journalism* 6, 8 (2018), 1078–1089.

[26] Kjerstin Thorson and Chris Wells. 2015. Curated Flows: A Framework for Mapping Media Exposure in the Digital Age. *Communication Theory* 26 (11 2015), n/a–n/a. doi:10.1111/comt.12087

[27] Scott Wright and Kim Doyle. 2019. The evolution of data journalism: A case study of Australia. *Journalism studies* 20, 13 (2019), 1811–1827.

[28] Mary Lynn Young, Alfred Hermida, and Johanna Fulda. 2018. What makes for great data journalism? A content analysis of data journalism awards finalists 2012–2015. *Journalism practice* 12, 1 (2018), 115–135.