

From Hashtags to Humanitarianism: Civic Engagement and Digital Mutual Aid During Natural Disasters

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Abstract. As climate change intensifies the frequency and severity of natural disasters, social media platforms are emerging as critical infrastructures for citizen-led humanitarian action. This study examines how digital mutual aid unfolded during Hurricane Helene in 2024, the deadliest U.S. hurricane since Katrina. Drawing on a mixed-method case study, including content analysis of social media, examination of crowdsourced Google Sheets, and secondary media sources, this paper analyzes how civic engagement transitioned from emotional expression to coordinated relief. The study illustrates how social media enabled real-time, decentralised crisis response through the evolution of hashtags, grassroots digital tools, and the amplification of marginalized voices. Theoretically grounded in Uses and Gratifications Theory, participatory culture, and platform logic, the analysis shows that social media platforms are not merely communication channels but distributed infrastructures that challenge top-down governance. The paper concludes with a call for hybrid models integrating grassroots energy into formal disaster planning, urging platforms and governments to ethically steward visibility, accountability, and civic voice during emergencies.

Keywords: social media, mutual aid, digital humanitarianism, participatory culture, crisis communication

1. Introduction

In recent years, natural disasters have become more frequent and severe, mainly due to the exacerbating effects of climate change [1]. Hurricane Helene struck the southeastern United States as a Category 4 storm on September 26, 2024, marking it the deadliest U.S. hurricane since Katrina. It caused over 220 fatalities and thousands of displacements, and amassed \$75-200 billion in damages. The storm destroyed critical infrastructure in western North Carolina alone, with over 1,000 bridges flooded and entire towns submerged [2].

As localized conditions worsen--cell service blackouts, power outages affecting million--the official response couldn't rapidly cover all needs. In this gap, digital platforms became frontline tools. Users aggregated urgent requests and shared locations on social media and community websites via a public Google Docs "People Finder" sheet containing thousands of names. In Asheville, North Carolina, the queer-led Pansy Collective, in collaboration with Mutual Aid Disaster Relief, mobilized six truckloads of essentials to remote mountain hubs within 48 hours before

FEMA deployment. Similarly, local lineworkers, aided by mutual aid crews, helped restore power to 60 % of South Carolina's customers within three days and 97 % within two weeks, significantly speeding recovery.

These grassroots feats point to a burgeoning form of digital humanitarianism: civic-driven mutual aid, activated through hashtags (#HeleneReliefSHFB, #HelenMutualAid) and decentralized coordination. This study examines how regular platform users independently provide assistance via shared digital infrastructures, differing from previous crisis communication research that focuses on official channels or misinformation control. Adopting a mixed-method case study, content analysis of social media, examination of crowdsourced tools like Google Sheets, and organizational interviews, this paper explores the trajectory from "hashtags to help." This study seeks to deepen understanding of how social media platforms function as channels of communication and as distributed infrastructures that enable real-time, citizen-led humanitarian efforts. It also explores their broader implications for theories of digital civic engagement and disaster governance.

2. Literature review

2.1. Crisis communication and the role of social media

Natural disasters often expose the limitations of traditional top-down emergency response systems, especially in the critical first hours after a crisis. Scholars have observed how social media fills these temporal and logistical gaps, enabling bottom-up, real-time, and geolocated communication flows [3]. As Mather reported, digital users across platforms mobilized immediately during Hurricane Helene, coordinating rescue efforts, offering temporary shelter, and even delivering essentials through information shared via hashtags and shared documents [4].

He et al. note social media eases help-seeking, yet high post volumes during disasters can overwhelm networks, dilute attention, and yield inconsistent results [5]. This dual nature of accessibility and saturation presents an ongoing tension in platform-based humanitarianism.

2.2. Digital humanitarianism and mutual aid

Digital humanitarianism uses digital tools and big data to support humanitarian response efforts [6]. Unlike institutional aid that follows formal channels and often arrives late, grassroots responses mediated by digital platforms are swift, adaptable, and community-oriented. As The Guardian noted, mutual-aid networks proliferated in impacted areas during Hurricane Helene, coordinating sustenance dissemination, healthcare provisions, and data exchange via platforms such as Facebook, X, and TikTok [2].

Spade characterizes mutual aid as a form of horizontal solidarity, distinct from charity in that it relies on decentralized, collective reciprocity [7]. This aligns with Soper's observation that queer mutual aid networks in Appalachia mobilized faster than official agencies like FEMA [8]. These efforts reveal how digital mutual aid supplements institutional gaps and redefines who has the power to act in moments of crisis.

2.3. Civic engagement and participatory culture

Jenkins' offer a foundational framework for understanding participatory culture, where users are not passive consumers but active creators and organizers [9]. In the context of disasters, this participatory principle is evident in digital civic engagement, encompassing livestreams, hashtags,

interactive maps, and collaborative spreadsheets that effectively merge media production with emergency management.

Bennett and Segerberg's theory of connective action further explains how such decentralized civic engagement is sustained through personalized content-sharing rather than centralized leadership [10]. In this model, the "hashtag" becomes a communication tool and a mobilizing structure, allowing people to coordinate loosely but effectively.

2.4. Challenges and ethical considerations

Despite its potential, digital mutual aid faces significant hurdles. Issues such as the veracity of information, digital inequity, emotional exhaustion, and the absence of formal oversight mechanisms impede the sustainable expansion of these initiatives [3]. Moreover, mutual-aid organizers are often unpaid, overburdened, and left with limited institutional support, as Houseal notes in her Teen Vogue analysis of post-Helene networks [11].

3. Theoretical framework

3.1. Uses and Gratifications Theory (UGT)

UGT suggests that media users actively select platforms to fulfill needs like information, emotional support, or social connection [12]. During disasters like Hurricane Helene, individuals turned to social media for:

- Real-time information (e.g., road closures, flood maps, shelter availability)
- Emotional relief and reassurance through storytelling and solidarity
- Direct appeals for help when official channels were inaccessible

3.2. Networked publics and participatory culture

Building on Jenkins' participatory culture [9], social media enables low-barrier civic co-creation, forming Boyd's "networked publics" [13]—distributed groups connected via digital tools (e.g., hashtags, shared docs) and driven by mutual aid. During Helene, these publics facilitated real-time, bottom-up humanitarian action, exemplifying Jenkins' "spreadable media," where sharing amplifies impact.

3.3. Media logic vs. platform logic

While traditional media logic emphasizes centralized gatekeeping and standardized formats, platform logic describes a new dynamic where algorithms, affordances, and APIs shape content visibility and action. Platform logic determines [14]:

- What is seen (e.g., popular hashtags, algorithmic amplification)
- Who is heard (e.g., accounts with higher engagement)
- How easily content circulates (e.g., retweets, duets, link embedding)

This logic creates disparities: some aid posts go viral, while others are buried—highlighting systemic inequities in digital relief efforts.

3.4. By integrating uses and gratifications theory, participatory culture, and platform logic, this research recognizes social media as both

- A tool for individual users to fulfill immediate crisis needs

- A space for collective civic action
- A system governed by infrastructural dynamics that shape visibility, access, and power

Together, these frameworks provide a robust lens to analyze how digital publics transform disaster response from a centralized rescue model to a distributed relief model.

4. Case analysis: social media-enabled mutual aid during hurricane helene

The case of Hurricane Helene provides a compelling illustration of how social media platforms functioned not only as information channels but also as interactive infrastructures for civic-led relief. Four key dimensions of user activity--hashtag evolution, crowdsourced spreadsheets, the amplification of marginalized voices, and emotional resonance--reveal the power of decentralized, digital mutual aid.

4.1. The evolution of crisis hashtags

Crisis hashtags transitioned from informational (#HurricaneHelene) to action-oriented (#HelenMutualAid), serving dual functions: (1) functional, by making requests and offers of help discoverable, and (2) symbolic, by uniting people under a shared language of grassroots solidarity. This aligns with Jenkins et al.'s concept of "spreadable media," in which digital content gains power through voluntary, networked circulation [9]. In several cases, tweets and TikToks tagged with #HelenMutualAid were shared tens of thousands of times, amplifying urgent pleas and connecting strangers in real-time.

4.2. Spreadsheet mutual aid as a digital infrastructure

One of the most widely circulated grassroots tools was a public Google Sheet titled "Helene People Finder," created by a user in Asheville, NC. It included sections where individuals could list:

- Their name or nickname
- GPS location or address
- Needs (medical supplies, food, evacuation help)
- Contact info
- "Status" (e.g., trapped, missing, safe)

This participatory infrastructure mirrors the 2021 Zhengzhou 7.20 flood, where Chinese users similarly leveraged public spreadsheets and WeChat to seek help when formal systems failed.

4.3. Amplifying marginalized voices

Social media also plays a role in correcting structural inequalities in disaster relief. Soper reported that the queer-led Appalachian Pansies collective organized six rescue convoys within 48 hours of FEMA deployment [8]. This illustrates how digitally visible minorities can be first responders, not just victims, challenging top-down vulnerability narratives.

Similarly, viral self-help videos tend to attract more engagement than official press conferences, confirming Bennett and Segerberg's concept of connected actions driven by emotional and personalized content [11].

4.4. Emotional resonance and digital empathy

In addition to coordination, digital empathy fueled mutual support in Helene. TikTok and Instagram were especially effective in creating engagement. Short videos combining emotional storytelling, music, and visuals of damage generated overwhelming support. Users commented not only with encouragement but also by offering shelter, rides, or donations. This affective dimension aligns with Boyd's notion of networked publics as information hubs and emotional communities [13].

Together, these mechanisms demonstrate that social media during Hurricane Helene functioned as a distributed system of civic care. This case underscores the shifting locus of power in crisis communication, from centralized agencies to participatory platforms and grassroots publics.

5. Discussion

5.1. Platform responsibility and ethical boundaries

The platform's silent yet active actor role cannot be ignored. Platforms like Twitter and TikTok shape visibility through algorithmic curation, privileging certain content based on engagement, virality, or monetization potential. This raises ethical concerns:

- What if urgent but low-engagement posts go unseen?
- Should platforms intervene in content prioritization during emergencies?
- How can misinformation be minimized without silencing marginalized users?

The opacity of platform logic limits users' understanding of why some cries for help go viral while others are lost.

Regulatory frameworks and crisis-specific algorithmic transparency protocols may be essential to ensure that digital platforms prioritize public interest during emergencies, rather than solely optimizing engagement metrics.

5.2. Storytelling and the politics of visibility

Disasters are not just material events—they are narratives. Who tells the story shapes who is seen and heard. During Hurricane Helene, mutual-aid efforts were often documented not by officials but through grassroots content: TikToks from trapped residents, tweets from queer organizers, and livestreams by undocumented migrants.

This shift challenges institutional control over crisis narratives, enabling citizen journalism to reclaim storytelling authority. As Jenkins et al. note, participatory culture broadens public discourse but also creates new exclusions [9]. Digital publics are unevenly inclusive, with algorithms amplifying some voices while marginalizing others. Additionally, as platforms become key to crisis response, questions arise about their accountability, oversight, and ethical obligations in managing visibility during emergencies.

Digital publics exhibit uneven inclusivity, with platform algorithms potentially amplifying specific narratives while marginalizing others. Furthermore, as digital platforms evolve into critical nodes of crisis management, concerns emerge regarding their accountability frameworks, regulatory oversight mechanisms, and ethical obligations in overseeing public communication and visibility during emergency situations.

Ultimately, the case of Hurricane Helene suggests that the reallocation of storytelling power is not simply a technological shift but a political and cultural redefinition of authority. Whether this transformation leads to greater civic empowerment, institutional renewal, or new forms of

fragmentation depends on how both digital actors and traditional institutions negotiate this evolving landscape.

6. Conclusion

The case of Hurricane Helene reveals that social media has become far more than a space for emotional expression or passive observation during natural disasters. It now facilitates civic participation, empowering affected populations and the general public to swiftly shift from passive observation of distress to active mobilization of aid, resource allocation, and life-saving interventions.

This paper has illustrated how hashtags, shared documents, short videos, and emotionally resonant storytelling collectively produced a digital mutual-aid ecosystem that operated faster, more inclusively, and often more locally than institutional systems. From the evolution of #HelenMutualAid to the success of crowdsourced Google Sheets and grassroots rescue networks, these efforts show that ordinary citizens, empowered by platforms, can become co-creators of crisis response.

For the field of communication studies, this expands our understanding of the media's role in society. Theoretical lenses such as participatory culture, networked publics, and platform logic help us critically evaluate how digital architectures shape who gets seen, who gets helped, and who gets to act.

Moving forward, key challenges include sustaining grassroots efforts and integrating them with formal systems. Policymakers must prioritize verified crisis information visibility while partnering with local digital networks. Digital humanitarianism's power lies not in replacing institutions, but in fostering collective responsibility--a critical resilience strategy for our disaster-prone future.

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