Negotiating Safety: Conflicts Between Emergency Evacuation Orders and Resident Resistance in the U.S.

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Sullivan Higgins

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

Sullivan Higgins

STS Advisor: Peter Norton

When dangerous weather events occur, emergency response authorities must assess the risk and issue evacuation orders for affected areas as quickly and efficiently as possible. Risk assessment, however, depends on weather forecasting, which is imprecise, and residents' capacity to evacuate varies widely. Historically, emergency response authorities have followed a "one-size-fits-all" approach to evacuation orders. For many residents, evacuation is not onerous. For some, however, evacuation can be hazardous in itself, or practically impossible.

Review of Research

Risk Perception

Residents' perception of risk influences their response to an evacuation order. In risk perception theory, proposed by Wildavsky and Dake (1990), a person's perception of risk is primarily determined by four factors: knowledge, personality, economics, and politics. Knowledge of risk allows one to understand its potential consequences. One's personality determines his innate tolerance for risk. Economic status affects the costs a person might incur in avoiding risk. Finally, political leanings can help determine a person's social standing and what values he regards as most important.

In the context of evacuation literature, the four major factors of risk perception are present. Boyd et al. (2009) found that the Hurricane Katrina evacuation was more successful than previous evacuations in the area, particularly for those able to evacuate under their own power, because of widespread education and urgent communication preceding the event. The public's advanced knowledge of the risks of Hurricane Katrina allowed them to make an informed decision regarding evacuating.

Another study of the Katrina evacuation found that the primary statistical predictors for whether residents evacuated were race and level of education (Theid & Brown, 2013), with the less-educated and members of predominantly minority communities being less likely to evacuate. For this community, the researchers closely tied these political factors to participants' economic status, indicating that many residents who did not evacuate were likely financially unable to. Whitehead et al. (2001) tied risk perception more clearly to socio-political standing; interviewees from all income levels responded similarly to questions regarding hypothetical storm scenarios. They noted that minority groups, women, and parents were less likely to evacuate if it meant staying in a communal shelter or a hotel.

Personality and its interaction with risk perception is less often discussed in literature pertaining to disaster events. A recent study conducted in Iran, however, included a personality survey in the data used to train discrete choice models (Mohajeri & Mirbaha, 2021). The researchers found that three personality traits can be strong positive predictors of evacuation behavior: neuroticism, conscientiousness, and openness. They found that these factors were as pivotal to evacuation modeling accuracy as a person's income or familial status.

Social Networks

Social Network Theory, or the characteristics of an individual's relationships, subcommunities, and broader community (Borgatti & Ofem, 2010) is another framework for studying evacuation decisions. An individual's social network is characterized by strength of relationships, number of relationships, and variety of relationship types. Stronger, larger, and more varied networks can raise evacuation rates during storm events. Sadri et al. (2022) found that residents with larger and more diverse social networks, specifically with respect to age and

gender, were more likely to evacuate during Hurricane Sandy. Collins et al. (2022) argue that the geographic dispersion of social networks also matters, reporting that residents surveyed before Hurricane Irma were more likely to evacuate if their strong social connections were more geographically dispersed. In many cases, this indicated that residents had social connections that they were comfortable relying on for shelter when evacuating. Lastly, Connolly et al. (2020) found that citizen compliance largely depends on their personal sense of community interconnectedness; if residents feel like a small part of a larger community, they are more likely to comply with local authorities' orders.

Legitimacy Theory

Perceived legitimacy of authority also influences evacuation decision making. Legitimacy Theory indicates that people listen to authority not because of their perceived power to incite consequence, but because of their established legitimacy (Tyler, 2006). When authority figures make decisions that people view as competent, proper, and just, they build legitimacy. This finding has also been referenced in other disaster evacuation research. Residents interviewed in New Orleans several weeks after Hurricane Katrina indicated that they would be hesitant to evacuate if ordered to do so in the future due to hardship that they faced in public shelters (Brodie et al., 2006). A survey conducted by Kim & Oh (2014) found a correlation between citizens' confidence in FEMA and reported willingness to evacuate during storm events. The legitimacy of authority is also affected by past evacuation scenarios and their outcomes. Dow & Cutter (1998) interviewed beachside residents in South Carolina who were ordered to evacuate their homes because of two seperate hurricanes in 1996. Their research found that residents who evacuated during the first hurricane due to the order but who came home to find

minimal damage afterward were much less likely to have evacuated during the second hurricane due to the order alone; if they did choose to evacuate, they cited reasoning other than following the issued evacuation order. There can be some reduction in residents' perceived legitimacy of authority the more often that residents are asked to comply with an evacuation, particularly if the residents view the evacuation order as having been unnecessary.

Competing Thought Processes and Agendas

When natural disasters occur, the residents of affected areas are left with a difficult choice: evacuate the area for personal safety, or take the risk of not evacuating. In the United States, emergency response authorities and residents who resist evacuation often have competing agendas, leading to varied prioritization during risk perception and assessment. These groups both contend for influence within social networks and vie for legitimacy when presenting information as well. Authorities seek to invoke high risk perception, use social networks to collectively encourage community members to evacuate, and assert institutional authority by issuing generalized, risk-averse evacuation orders. Residents who resist these evacuation orders rationalize minimization of risk, use social networks to justify their decision, and legitimize non-institutional sources. Historically, emergency response authorities have followed a "one-size-fits-all" approach to evacuation orders. For many individuals, these orders pose few problems and can be followed without facing heightened risks; however, for others, evacuating can lead to facing even greater risk than simply staying put, or compliance may be impossible altogether.

Risk Perception of Potential Evacuees

A potential evacuee's risk perception depends heavily on their prior knowledge of the risk, socio-economic status, and natural variance in personalities. When making an evacuation decision, how and when residents gain knowledge of the impending event is crucial. Residents who are made aware of the risks facing them prior to the occurrence of a natural disaster are better able to inform their decision to leave or not. For example, Dr. Walter Maestri, an official involved with emergency management during Hurricane Katrina, remarked that evacuation of the area only had the success it did because of education prior to the event (Frontline PBS, 2015). New Orleans and the surrounding counties "produced videos, gave lectures, interviews on television stations [and] newspapers…" in the years leading up to Hurricane Katrina. He also attributed the success of the evacuation to specific modeling of the storm's damage, which was featured on TV in the days before the event and "showed 5 to 6 feet of water in place" for large parts of the evacuation zone. A resident in New Orleans at the time who had been exposed to storm risk awareness campaigns as well as media specific to Hurricane Katrina was able to perceive the risk of the storm through this education.

The socioeconomic status of residents can also affect risk perception and decision making; factors like complex family structure and lack of access to funds can cause households to require a higher perceived risk of a storm event to consider evacuating. Lower-income households often do not evacuate because of financial inability; a non-profit director in Florida says they see residents during storm events who are not financially able to " take days off of work, that don't have money to evacuate, that don't have money to stockpile food," limiting their options when making an evacuation decision (Horn-Muller, 2024). Residents may also be less likely to evacuate if they are disabled or caring for someone who is disabled (Debusmann &

Ostasiewicz, 2022) or if they have pets or livestock who cannot evacuate with them (Chamlee, 2024).

Socioeconomic status is not an exact predictor of behavior. Within every community, there is variance in personality from one person to the next. Residents who receive the same messaging and are of the same socioeconomic status may not make the same evacuation decisions. However, there are often mindsets that are broadly shared within communities that greatly influence the success of evacuations. In Florida, one of these shared community personality traits is a "culture around non-evacuation," as remarked by a longtime resident and reporter who discussed close family members who chose not to evacuate for Hurricane Milton primarily because they never had before (Page, 2024). He remarks on his own experience with this culture when he stayed in Pensacola Florida during Hurricane Sally, resisting evacuation orders. Particularly, wading through "ankle deep water in [his] apartment" while neighbors hosted a hurricane party upstairs. In his and his family's experience, risk-taking during storm events seems normal because it is a cultural phenomenon, an attribute of being part of the Floridian community. When ordering such a community to evacuate, officials may see lower success rates due to the community's culturally high risk tolerance and low risk perception.

Many residents cite staying to "protect" their homes as a reason not to evacuate. One family cited that they were "aware that in the wake of a hurricane the likelihood of looting increases" which made them hesitant to evacuate (Lifshin, 2024). Some choose to stay during a storm hoping to protect and immediately repair damage in their homes following the storm, but this requires putting themselves at risk during the event itself. A similar thought process occurs much more quickly during fire disasters, such as for a resident who fought the fire threatening his house with a garden hose rather than evacuating during the 2025 L.A. Fires. In an interview

later, John Carr said he chose to stay both because he felt it would be difficult for him to afford another house if his house burned down and also because his parents had built the house, “so there's a lot of memories” (DRM News, 2024). When residents think they may be able to protect their property, they may disregard risks rather than leave it to chance.

Growing Influence of Social Networks through Social Media

Social networks influence residents’ evacuation decisions by helping to notify residents about evacuation orders or potentially influencing a resident’s choices through shared opinion. Through much of history, social networks have been relatively limited, both in size and frequency of interaction. Today, most social network formation takes place via social media. This changes the modality of social networks in emergency events by providing a platform for instantaneous communication and interaction with a much broader group, both within a specific community and beyond.

With respect to notification, social media has greatly increased the speed at which evacuation orders reach the public. A reporter from New Orleans reflects that while “any meteorologist knew New Orleans was in serious danger,” it took time for news of the necessity for evacuation to travel through the community, and longer still for officials nationwide to understand the need for aid (Samenow, 2021). He remembers that most of the city was “appropriately aware” of the danger by the time the storm hit, but is certain that the speed of information dissemination on social media would have “helped mobilize the city and identify residents who needed help evacuating faster”. He also believes that the extended reach of social networks through social media would have brought aid to New Orleans residents who were evacuating sooner. The speed at which information travels due to social media is a positive factor

towards evacuation success, as residents have more time with which to make a decision about evacuating and to arrange accommodations that they find acceptable.

The speed and volume at which residents consume information about impending events through social media can also be a detriment to the clarity with which they are able to process said information. The L.A. County wildfires are one such example where there was a vacuum of information on social media, causing residents to experience decision paralysis; “the constant stream of media keeps us in a heightened state… [people] need to know if they’re in a safe zone or if they should be preparing to evacuate, but this constant engagement takes a toll” (Villafuerte, 2025). Social media can also promote the spread of misinformation, such as after Hurricane Helene when false rumors spread across social media about the presence of a second storm, misdirecting residents into evacuating once again. One resident commented “when you are with limited cell service and you come across misinformation, you can make a split-second decision that can have life-or-death consequences” (Joselow, 2025) While comparatively harmless in this situation, misinformation surrounding storm events and disasters can cause more issues for emergency response authorities and residents alike in the wake of these events.

Interactions of social networks through social media can further affect residents’ evacuation decisions through peer-to-peer influence. Social media exposes people to a broad range of views and opinions about evacuation orders that are potentially facing them or their neighbors. When residents see that many of their peers in the community are evacuating they may be more likely to do so themselves. However, the opportunistic attempt at gaining internet fame during these events is a phenomenon that is gaining traction in recent years and is uniquely the result of the rise of social media. During Hurricane Milton, two Tampa residents grew famous for their ill-advised decisions to weather the storm in their beachside condo and small

sailboat.. Joseph Milwaski, the sailboat owner, captured internet attention stating that he would not evacuate because “the safest place to be is on a boat in a flood” (Hagstrom, 2024). As his clip went viral, concerned onlookers set up a donation base for him during the storm that earned $46,000 (Botelho, 2024). Similarly, Caroline Calloway posted content from her beachside condo building throughout Hurricane Milton, intermixed with advertisements for her new book (Stieb, 2024). While these social media personalities may not necessarily have decided to not evacuate because of a perceived social media opportunity, content focused around deciding not to evacuate normalizes extreme risk-taking during storm events and encourages objectively dangerous behavior.

Perceived Legitimacy of Authority

In order for public officials to be able to effectively coordinate evacuation efforts, it is imperative that they obtain public confidence. Residents of disaster-prone areas gain this confidence in authority through experiencing successful evacuations. However, when evacuation orders are necessary and do not come in time, or are given and then perceived as unnecessary, residents lose faith in public officials.

During the 2025 Los Angeles wildfires, many residents felt they were not given sufficient warning to evacuate. The Los Angeles county fire department did not order residents to evacuate until almost 45 minutes after houses were actively burning in the Palisades neighborhood. Many residents decided to evacuate on their own when they saw flames approaching, stating that they “[had] concerns it took as long as it did to issue an evacuation order” and felt that they no longer trusted the fire department to issue evacuation orders in time for them to evacuate in the future (AP via Scripps News, 2025). This mistrust can be quantified by the more than half a million

people who downloaded Watch Duty, an independent fire warning system app, in just twelve hours after the event (Rosenblatt, 2025). When residents resort to independent warning systems because of their distrust in officials, it can cause disorganization in future evacuations due to the presence of multiple, potentially conflicting, sources of information.

One opportunity for conflicting information preceding storm events is independent meteorologists. For example, Mike's Weather Page has become a source of storm information that is trusted as much or more than many institutional weather news sources by some individuals; Mike Boylan, who has close to two million followers across his social media platforms, commonly shows potential paths for storms and gives commentary (Ballogg, 2023). Boylan often echoes evacuation orders when they are given, and urges his followers to favor caution during storm events. However, his videos are inherently for-profit, the social media platforms are his full-time employment, and Boylan is an amateur meteorologist with no formal education in the subject (Runnells, 2024). Social media meteorologists, like Boylan, make profit from their videos when more people watch them; people often turn to social media when there's a possibility of a storm. Naturally, these amateur meteorologists will often "present the most grim interpretation of meteorological readings possible" according to National Weather Service Meteorologist Rudy DiCarlo. This can be dangerous because people in hurricane prone areas are kept at high-alert throughout all of hurricane season, making it more difficult for them to discern when they actually need to evacuate or not (Ramey, 2024).

Officials must balance the importance of giving an evacuation order when necessary with the importance of not fatiguing residents of disaster-prone areas with unnecessary evacuations. When people are ordered to evacuate but their area ultimately remains mostly unaffected, they may be less likely to choose to evacuate when ordered the next time. For example, residents of

Queens Island, in New York, were ordered to evacuate for Hurricane Irene in 2011, which turned out to have "minimal effects," according to a resident (Hodnett, 2013). When asked to evacuate again in 2012 for Hurricane Sandy, "not many people evacuated. They thought the rumors of Sandy's potential danger were all hype." Hurricane Sandy turned out to be much more destructive, but authorities in the area seemingly lost their legitimacy in the public eye, causing the evacuation to be less successful and putting lives in danger.

One professor researching evacuations ahead of Hurricane Helene coined the phenomenon of authorities losing legitimacy over a series of storms "Storm Fatigue" (Franklin, 2023). After several unnecessary and expensive evacuations, residents become "more skeptical." Franklin not only tied residents' unwillingness to evacuate after prior compliance to financial stress, but also mental fatigue and the idea that if their homes survived one storm, they would likely survive another. This was a major factor for officials in Florida in 2024 as the state was struck by both Hurricane Helene and Hurricane Milton in quick succession. Large portions of the state were issued evacuation orders for both storms. One resident interviewed before Hurricane Milton said "To be honest, I think we're all thinking… 'not again.' We're getting a bit… over it" (Murphy & Krupa, 2024). The resident goes on to point out that her storm shutters weathered Hurricane Helene without issue, and she believes Milton will be no different. Another resident, who was within two miles of the beach, cited the same logic; his house had not flooded through the last three hurricanes, and "likely" would not flood during this one (Frederick, 2024).

For storm disasters in particular, it can be difficult for officials to understand exactly where a storm will hit. Often, the lowest-risk option is to evacuate many more people than will actually be affected when the storm makes landfall. Officials must balance evacuating all

necessary areas with limiting evacuation orders for those who remain relatively safe in order to not cause desensitization to evacuation orders.

Conclusion

When examining why residents choose to evacuate when ordered to or not, three primary factors influence an individual's decision making: how they perceive risks, how connected they feel to social networks, and how they view the legitimacy of authority. Understanding these motivations helps inform policy surrounding evacuations and assists with the creation of more effective evacuation order messaging. To ensure residents effectively perceive risk, authorities should emphasize disaster education and strive to notify residents as early as possible preceding an event, while also working to ensure that every resident has the ability to consider evacuating given the resources available to them. It is also important for emergency response authorities to understand the negative impact associated with issuing too many evacuation orders or overly-cautious orders as affected residents become more and more resistant to these orders after returning to find little damage.

By dedicating sufficient resources and time to refine emergency response procedures such that authorities have the ability to issue accurate, timely evacuation orders and that residents who may not be able to comply be given other forms of assistance, emergency response authorities earn the trust of their communities. This trust reinforces the legitimacy of the authorities and promotes positive social networking interactions during and after disasters.

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