Online Media as a Means to Affect Public Trust in Emergency Responders

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ABSTRACT

This exploratory study examines how fire and police departments used online media during the 2012 Hurricane Sandy and how these media can be used to affect trust with members of the public during such an event. Using trust theory, we describe how online communications provide a means for emergency responders to appear trustworthy through online acts of ability, integrity, and benevolence. We conclude with implications and recommendations for emergency response practice and a trajectory of future work.

Keywords

trust, computer-mediated communication, crisis informatics, emergency response, social media

INTRODUCTION

Public information work—that work through which emergency responders provide timely, accurate, and relevant information to affected populations—plays a critical role in any crisis event (Lindell and Perry, 2004; Reynolds and Seeger, 2005; Wray, Becker, Henderson, Glik, Jupka, Middleton, Henderson, Drury and Mitchell, 2008). Through public information work, emergency responders extend life saving protective measures, facilitate relief and recovery efforts, identify and correct false rumor and misinformation, and reduce public anxiety and fears (Stockdale and Sood, 1989; Wray, Rivers, Whitworth and Jupka, 2006; Sorensen and Sorensen, 2007). However, emergency responders must establish and maintain relationships of trust with the public if they want their public information work to be effective; members of the public are more likely to listen to and comply with emergency messaging if they trust those sending the messages (Mileti and Sorensen, 1990; Rubin, Chowdhury and Amlôt, 2012; Wachinger, Renn, Begg and Kuhlicke, 2013).

In this research, we examine fire and police department use of online media during Hurricane Sandy (2012) to better understand how emergency responders can affect public trust. We investigate fire and police activity during this event because these agencies play a vital role in disseminating information to the public regarding emergency preparedness, response, and recovery (Wenger, Quarantelli and Dynes, 1989). Large-scale disaster events like Hurricane Sandy require substantial information needs as well as coordinated response and recovery efforts. Better understanding of how the online communications of emergency responders can affect public trust can help responders improve relationships with the public and ultimately increase the effectiveness of emergency response efforts.

Online Public Information Work in Crisis

Most studies regarding online media use for emergency public information work focus on understanding how emergency response organizations adopt tools like social media and the challenges faced in fitting these new communication tools with emergency response needs and practice (Latonero and Shklovski, 2011; Hughes and Palen, 2012; Sutton, Spiro, Butts, Fitzhugh, Johnson and Greczek, 2013; Hiltz, Kushma and Plotnick, 2014; St. Denis, Palen and Anderson, 2014). Yet, despite recognition that online media can support emergency public information work, adoption has been slow and overall use remains low. Hughes et al. (2014) report low use of online communication media during 2012 Hurricane Sandy, and they suggest that better understanding of the

reasons could reveal opportunities to increase online media use and value to the emergency management community. Since online technology rapidly changes and its use is still relatively new, much is still unknown about the use of online media in emergency response work.

Trust in Online Crisis Communications

Trust has previously been considered in the domain of online crisis communications, but usually regarding whether emergency responders can trust the information that the public provide through online media (Mendoza, Poblete and Castillo, 2010; Tapia, Bajpai, Jansen and Yen, 2011). Emergency responders tend to mistrust online information generated by the public because they worry about false rumor, misinformation, and information quality.

This research takes a different angle on trust by looking at how online media can be used as a tool for emergency responders to increase trust with members of the public. We assert that measures to establish, maintain, and build trust by emergency responders are worthy of attention because trust between responders and members of the public can facilitate more effective emergency preparation, response, and recovery efforts.

Theory of Trust

Many different disciplines have studied the concept of trust, including sociology, psychology, communications, management, economics, and computer science (Mayer, Davis and Schoorman, 1995; Lewicki, 2006; Lewis and Weigert, 2012; Sherchan, Nepal and Paris, 2013). As a result, many competing definitions, perspectives, and theories around trust exist. To further complicate the space, issues of trust must be newly considered and evaluated as new forms of communication and interaction become available (such as social media).

Much of the research that examines trust in online social networks—our area of concern for this paper—focuses on how people trust online information (Kelton, Fleischmann and Wallace, 2008). However, our focus here is not on trust in the information or the presentation of that information but rather on how the public trusts the departments behind the information and online presence. To do this we rely on a psychology-based approach—one that focuses on identifying the characteristics that underlie beliefs that someone is trustworthy. By doing so, we can attempt to identify, at least in theory, those types of behaviors that might be perceived as trustworthy by members of the public. Specifically, we base our analysis on a trust model theorized by Mayer, Davis & Schoorman (1995) that integrates many different past models of trust into one. Mayer et al.'s model decomposes trust into two components—*trustworthiness* and *trust propensity*. Trustworthiness determines whether the trustee can be trusted, while trust propensity determines how likely the trustor is to trust. Here, we focus on trustworthiness because emergency responders cannot control the public's propensity to trust; they can only influence how trustworthy they appear to the public (Lewicki, 2006).

The three factors attributed to trustworthiness include *ability*, *integrity*, and *benevolence* (Mayer, Davis and Schoorman, 1995; Lewicki, 2006). Ability subsumes those attributes, proficiencies, and skills that give a trustee competence within a domain. Integrity measures the trustee's reliability and credibility as well as their adherence to a set of principles that the trustor finds acceptable. Finally, benevolence relates the likelihood the trustee desires to do good for the trustor. The ability and integrity factors of trustworthiness center more on trustee behavior, while the benevolence factor centers more on the motives and intentions of the trustee towards the trustor (Lewicki, 2006). We apply Mayer et al.'s theory of trust to demonstrate the ways in which emergency responders seek to affect their trustworthiness with the public through online communications.

THE STUDY

Event of Study

Hurricane Sandy began as a Category 1 hurricane in the Caribbean Sea on Oct 22, 2012. The hurricane then tracked north, hitting Jamaica, Cuba, and Haiti before making US landfall in Brigantine, New Jersey as a Category 2 hurricane on Oct 29, 2012. Hurricane Sandy is one of the most deadly (117 deaths) and costly (estimates near $50 billion USD) hurricanes in United States history (Blake, Kimberlain, Berg, Cangialosi and Beven II, 2013). The extreme conditions of Hurricane Sandy resulted in severe disruption to the US northeast coast, damaging or destroying over 650,000 homes (Blake et al., 2013) and displacing roughly 776,000 people (Yonetani, Holladay, Ginnetti, Pierre, Wissing, Morris and Natali, 2013).

Category	Description
Cleanup	Clearing of hurricane debris
Closures	Closure/re-opening of public offices, transportation services, access routes, and scheduled events
Damage	Storm damage information
Donations	Donations of time (volunteering), money, or supplies to relief efforts
Engagement	Invitations to engage with department on social media or direct responses to public posts/tweets
Evacuation	Evacuation order and shelter information
Preparation	Storm preparation information
Protocol	Formal response protocol information (e.g. when to call 9-1-1 versus 3-1-1)
Reassurance	Reassurance to the public that first responders are prepared for or actively monitoring the storm
Reference	Reference to an external information source
Relief	Storm assistance or relief information
Response	Specific incidents or response efforts during the hurricane
Resources	Information about supplies needed or available
Rumor	Misinformation and rumor
Safety	Safety precautions or conditions
Services	Power , phone, internet, or cable services information
Status	Changing storm condition information
Support	Expression of gratitude or support
Weather	Weather updates

Table 1: Nixle, Twitter, Facebook Content Coding Scheme – Reproduced from (Hughes et al., 2014) with Permission

Data Sets

This research builds and expands upon the results of a recent study (Hughes et al., 2014) that examines the online communications of fire and police departments during Hurricane Sandy. In this study, the researchers first identified all the fire and police departments located in the coastal counties within a 100-mile radius of Hurricane Sandy's landfall—840 departments (568 fire departments and 272 police departments). The researchers then identified whether each department had an account for any of the three most commonly occurring social media in this data set: a subscriber-based notification service (Nixle), a microblogging service (Twitter), and a social networking service (Facebook). Next, the researchers collected all the messages sent by these fire and police departments over their accounts between October 24, 2012 and November 9, 2012. Researchers used a web-scraping script to collect Nixle messages, the Graph API to collect Facebook Messages, and the Twitter REST API to collect Twitter messages. Only original messages sent by the fire and police departments were collected; researchers did not collect messages by the departments that were rebroadcast by others or messages that were sent to the departments. The resulting message data set comprises 930 Nixle posts, 3033 tweets, and 4652 Facebook posts. Finally, the researchers coded the Nixle, Twitter, and Facebook messages for content using an iterative pair-coding process. In this coding scheme (see Table 1), messages could be coded for more than one category. The coding process and resulting insights are reported more fully in Hughes et al. (2014).

Additional Analysis

We obtained access to the data sets used in Hughes et al. (2014) and performed additional analysis on the data to better understand emergency responders' trust-related activities. First, we revisited the previously collected content categories looking for categories that demonstrated how emergency responders sought to portray themselves as trustworthy. Next, both authors read through the message data sets independently. Using discourse analysis (Fairclough, 2003), we each identified textual examples where departments demonstrated ability, integrity, and benevolence according to the definitions given above. We then met together to compare our analyses and resolve discrepancies. We draw on salient examples of trustworthiness from our discourse analysis as well as construct new statistical and visual analyses that show patterns in the data.

RESULTS

In this section, we describe the ways in which the police and fire departments affected by Hurricane Sandy identified themselves as trustworthy to members of the public through their online communications. We organize our findings around the three dimensions of trustworthiness identified by Mayer et al. (1995): ability, integrity, and benevolence.

Ability

Police and fire departments possess a set of skills and proficiencies in emergency response that affords them trust in tasks related to that domain. These departments demonstrated their ability to respond to the unpredictable and extreme circumstances surrounding Hurricane Sandy by supplying timely and relevant information, serving as local domain-specific authorities, and citing others for information outside their domain.

Category	Percentage of Messages
Cleanup	2.01%
Closures	19.05%
Damage	3.46%
Donations	5.42%
Engagement	10.97%
Evacuation	9.46%
Preparation	5.97%
Protocol	4.70%
Reassurance	7.88%
Reference	17.07%
Relief	4.6%
Response	2.67%
Resources	5.24%
Rumor	0.78%
Safety	12.70%
Services	8.42%
Status	10.53%
Support	4.02%
Weather	12.50%

Table 2: Percentage of Total Online Messages by Content Coding Category

Supplying Timely & Relevant Information

Surrounding Hurricane Sandy and its aftermath, many fire and police departments provided information online to the affected community. Table 2 shows the percentage of online messages in each content category and Figure 1 plots the frequency distributions of the communication content categories across the data collection timeframe. These distributions show how communications temporally evolved to match the status of the storm, the response efforts, and the current needs and concerns of the public.

Five days prior to Hurricane Sandy's landfall, meteorologists identified the storm and predicted a likely landfall on the US eastern coast. At this time, fire and police departments began to prepare their communities and to report the status of the hurricane with *preparation* (5.97%) and *weather* (12.50%) messages. These communications continued at an accelerated pace as the storm approached and the hurricane's trajectory and projected severity became more certain. A few days before landfall, responders began to send *evacuation* (9.46%) messages. These *preparation* (5.97%), *weather* (12.50%)*,* and *evacuation* (9.46%) messages tapered off after Sandy made landfall, likely because the information was no longer relevant given evolving circumstances (see Figure 1).

Starting October 29, the date of landfall, a spike in *response* (2.67%) related communication appears:

@GNVFDChief[1] **via Twitter** (10/29/12 16:10): #gnvfd responding to a boat drifting in the #littleneck bay off of #greatneckestates. #oneida water rescue is responding.

In this example, the fire department shows they are trustworthy by offering insight into rescue activity to which the public may not normally have access. Additionally, the department does not know if the rescue will be successful, so they are still vulnerable as far as their reputation as a "rescue organization" is concerned. They may not save the drifting boat, but at least the public knows they are trying.

Following landfall, the most frequent message type was *closures* (19.05%). These messages shared information about the closure and reopening of schools, government buildings, and transportation services (such as roads, bridges, and subway systems). Closure messages were more abundant around the time of heaviest impact, however they continued throughout the period of investigation as buildings and transportation services began to reopen.

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[1] The names of private individuals have been anonymized, while the names of public individuals and organizations remain unaltered.
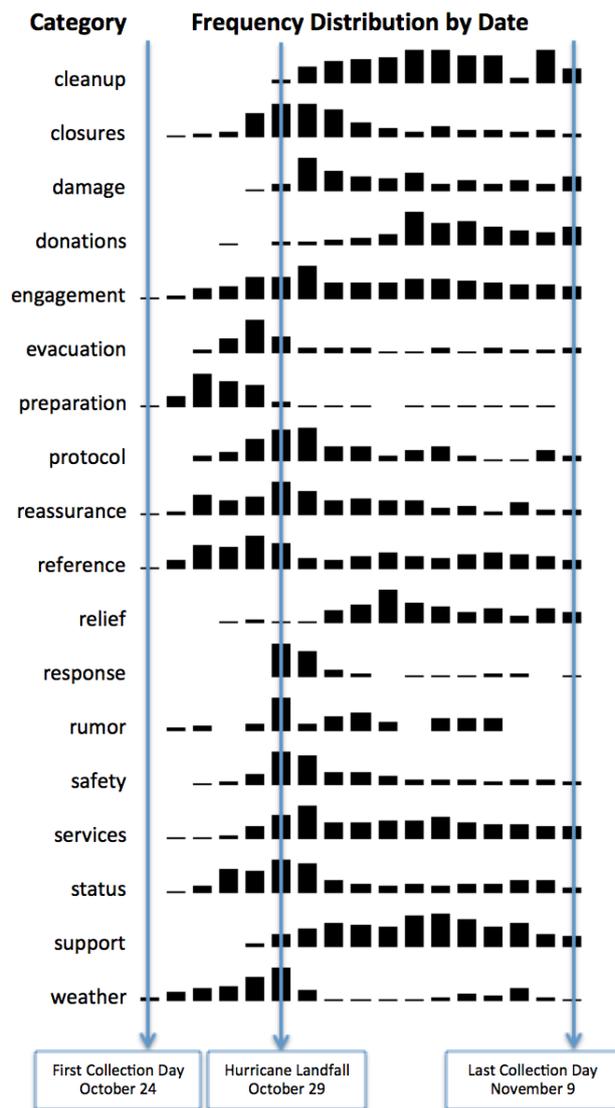
Figure 1: Frequency of Content Categories in Nixle, Twitter, and Facebook Communications between 10/24/12 – 11/9/12

Later, as the fire and police response began to shift beyond addressing immediate emergency needs, communications around recovery efforts started to surface (*cleanup*—2.01%, *relief*—4.6%, and *donations*—5.42% messages):

@HarrisonNY_PD via Twitter (11/2/12 22:47): A number of streets are being cleared as soon as possible to allow access to residents....

@EHTPolice via Twitter (11/8/12 14:26): FEMA inspectors will be going house to house in West Atlantic City and will be credentialed.

Long Beach Township Police Department via Nixle (11/9/2012 16:07): LBI seeking electric heater donations: Due to the lack of natural gas on LBI, we have residents who will be returning to their homes and will be without heat. Any and all assistance is appreciated. Please email lbieocdonations@lbtpd.org

In the second example above, a police department states that FEMA inspectors will be credentialed, which helps citizens to recognize those who can legally and responsibly help them. By providing this information, the police department fosters credibility and trust.

Before, during, and after Hurricane Sandy made landfall, fire and police departments sent messages of *reassurance* (7.88%) that sought to ease public fears (see Figure 1):

@WilmFire via Twitter (10/28/12 23:43): WFD is on standby, Extra Manpower, Apparatus and Equipment ready for service! We are here for the duration! Great job on prep! #wilmde

These communications expressed the department's readiness, willingness, and ability to respond.

Departments also sent *protocol* (4.70%)

messages throughout the event:

@WilliamKrause2 via Twitter (10/30/12 7:10): Twsp. Police can not assist you with power outages. You must call power companies. Call 9-1-1 if outage involves dangerous situation only.

Protocol messages informed the public about the official procedures for requesting assistance and accessing information. These messages also reminded the public that fire and police departments have specific domains for which they are trained and accountable. For example, in the message above, the police department states that they do not have the ability to help with power outages. However, they will assist if the outage becomes dangerous—a situation that lies within their domain as a police department. Thus, these messages suggest to the public that fire and police departments can be trusted to properly handle those situations that fall under their domain.

Serving as a Local Domain-Specific Authority

Members of the public affected by large-scale crisis events often encounter difficulty when trying to find information specific to their concerns and circumstances. The broadcast media (i.e., tv news, newspapers) tend to report large-scale trends and information of general interest during these types of events. In such situations,

online media can serve as a communication "back-channel" where members of the public can seek and share more localized reports (Sutton, Palen and Shklovski, 2008). In the data, we saw fire and police departments provide detailed knowledge about the local circumstances of the event:

@QAsheriff via Twitter (10/31/12 12:30): Grange Hall Road is closed from Route 213 to Poplar School Road, until further notice.

This message from a local sheriff's department shared information with the public about specific road closure locations. In this way, emergency responders can foster trust with their public by providing information that closely addresses the local public's needs and concerns.

Citing Others for Information Outside their Domain

When information did not fall within their domain of expertise, fire and police departments would often cite others (*reference* messages—17.07%). These citations served several purposes. First, departments cited others to refer the public to a different source for more information:

Rescue Fire Company via Facebook (10/26/2012 15:29): Are you ready for Hurricane Sandy? Prepare NOW. This site offers some great Hurricane preparedness tips: www.ready.gov

At other times, citations were meant to recommend a party as a good and credible source of information. If a fire or police department felt they were not the most qualified to respond to a query, they would recommend someone who could help:

@OceanCounty911 via Twitter (11/6/12 16:12) Find displaced residents using the Red Cross Safe and Well website. https://t.co/NV4js5O6

Finally, citations also appeared in the messages that fire and police departments rebroadcast. Departments played an important role in the larger response effort by redistributing or rebroadcasting information from other responding agencies. In Twitter, rebroadcasting was accomplished through retweets:

@FDNY via Twitter (10/29/2012 12:44) RT @NYCMayorsOffice: If you are still in Zone A and have a way to get out, leave IMMEDIATELY. Conditions are quickly getting worse. #Sandy

The act of rebroadcasting served to distribute the information to a broader audience while also authenticating the information as trustworthy and accurate. Rebroadcasting also shows whom the emergency responder trusts and perhaps also whom the public might want to trust (provided they trust the emergency responder sending the rebroadcast).

Integrity

To demonstrate integrity, one must prove reliable, consistent, and credible by keeping one's word and demonstrating commitment to shared ideas of fairness (Lewicki, 2006). Fire and police departments demonstrated integrity through online media by reporting their response efforts, making themselves publically visible, and correcting false rumor and misinformation.

Reporting Response Efforts

Often fire and police departments sent messages that described their response efforts. Messages that fell in this *response* (2.67%) category demonstrated how these departments were responding to the incident as well as provided documentation of the efforts and actions taken:

New York Police Department via Facebook (10/31/2012 14:00) - NYPD Aviation and SCUBA officers rescued five adults and one child from rooftops on Staten Island Tuesday after residents were trapped in their homes during Hurricane Sandy. (More videos via http://www.youtube.com/playlist?list=UUfJJ9vqyUPRkyUvnGSB-56Q)

Messages like this one publically display a department's commitment to serving its community—a testament that they can be trusted to assist the public when needed. Yet, these messages also expose the department to increased criticism as we discuss in the next subsection.

Making Themselves Publically Visible

By having a social media account or a website, fire and police departments have become more visible to members of the public than they were before such tools existed. This increased visibility can make departments more open to public scrutiny and criticism. Likewise, if the members of the public know they can reply to fire and police department messages and that their comments, questions, and critiques will be visible to others, it can help them hold these departments more accountable for their actions. In this kind of environment, we predict that departments will need to establish, maintain, and build relationships of trust with the public in more explicit ways.

On the other hand, increased public scrutiny can have a positive effect if citizens are satisfied with the actions of the fire or police department:

Citizen via Facebook (11/4/2014): I never realized just what it is that you all do in times of crisis until I saw firsthand while working out of the firehouse. Allenhurst is lucky to have you and that you are all VOLUNTEERS. As I looked around and saw the amount of people you were feeding, keeping warm, providing electric and pumping out And all on little or no sleep and while you have problems of your own I was humbled. Thank you for making me feel at home.

Even though the fire department did not post this message, they made the message possible by having an online account that accepts public feedback. Citizens can then boost the confidence and trust of other citizens in that department by posting messages like this one.

Correcting Rumor & Misinformation

Fire and police departments also demonstrated integrity by assuring that available information was accurate and correcting rumor and misinformation (*rumor* messages—0.78%):

South River Police Department via Facebook (10/31/2012 12:39):

WATER SHUTOFF RUMOR

There is no truth to the rumor that has been circulating about water service being shutoff. There are no plans to shutoff water service anywhere in South River. In addition, there are no problems with our water supply in South River. It is SAFE TO CONSUME AND USE.

Prompt correction of false rumor demonstrates integrity and a commitment to sharing the most accurate information.

Benevolence

Fire and police departments have a mission to protect and preserve the communities that they serve, which can be interpreted as a mission of benevolence. We can see how they demonstrate this mission online by responding to public inquiry, invoking a sense of community, and adapting procedures to address public needs.

Responding to Public Inquiry

By responding to public inquiry in a timely and sensitive way, departments show that they care about the community and will respond when needed (*engagement* messages—10.97%). The following exchange between a citizen and a police department demonstrates how one department used Facebook as a means to show concern for the public:

Citizen via Facebook (10/27/2012 6:40) - What happens to the people who can't afford a hotel and has dogs and kids!? We have to stay here I guess. Hotels should offer help

Wildwood, NJ Police via Facebook (10/27/2012 9:38) - The local police departments will have extra units that will stay behind. So if you can't afford a hotel they will make sure that nobody will be left in a bad situation. If you feel concerned please call the wildwood police station's "Non Emergency" number and they will tell you what to do. Stay safe and god bless

This police department builds public trust in their department by showing empathy for members of the community that they serve.

Invoking a Sense of Community

Certain types of online messages call forth a sense of solidarity and community:

`@FreeholdFire via Twitter` (10/30/12 7:11) - Out of power? You're not alone. Approx 95% of Freehold has no power due to winds blowing power/cable lines & telephone poles over! #Sandy

These messages assure the public that they are not alone.

While most online messages in the data set are one-way pushes of information (89.03%), we did find instances where emergency responders solicited the public for help or information:

`Queen Anne's County Dept. of Emergency Services` (10/26/2012 18:01): Please send us your pictures of Hurricane Sandy or any other events in the county. Email them to <email address removed> - Thanks!

`@MB33FD via Twitter` (10/31/12 10:01): ...WE ARE IN DESPERATE NEED OF A PLUMBER TO HELP FIX OUR BOILER/FURNACE. ANY PLUMBERS THAT CAN ASSIST US IN THE MONMOUTH BEACH AREA???

These messages show that emergency responders value input and assistance from the public.

Adapting Procedures to Address Public Needs

Finally, another way these departments demonstrated benevolence was through their willingness to adapt formal procedures to address the needs of the public. The most poignant example of this behavior comes from the New York Fire Department (FDNY) and their response to Twitter requests for help (Hughes et al., 2014). During the height of Hurricane Sandy, when emergency resources were already stretched thin, a five-alarm fire broke out in the Breezy Point neighborhood of Queens, New York City. The influx of calls to 911 dispatch had overwhelmed the system and people in need of assistance were unable to get through. At this time, members of the public began sending requests for assistance over Twitter. At first, the person monitoring the FDNY Twitter account instructed citizens to contact the authorities through the proper channels, but as it became clear that those channels were not working, she began responding to these requests. The following message reflects this changing status:

`@FDNY via Twitter` (Oct 30 0:23): @Bleymor @Lisar @twitter @rass Don't want NYC to rely on this as an alt to 911. But notifying dispatchers of all emergencies tweeted

Through this message, the FDNY is telling the public that they have been heard, and that the FDNY is responding and can be trusted.

Emergency response is known for improvisational work (Mendonca, Beroggi and Wallace, 2001); crisis events are unpredictable and plans can seldom account for the deeply contextual conditions one encounters in practice (Suchman, 1987). While improvisation may suggest inconsistency on the part of the FDNY, we argue that this action demonstrates benevolence because their actions show dedication to assist and preserve members of the public.

DISCUSSION

We have shown, using Mayer et al.'s (1995) theory of trust, that emergency responders can portray themselves as trustworthy through online acts of ability, integrity, and benevolence. For example, online media provide communication channels where responders can supply timely and relevant information, report their efforts, reply to public inquiry, and correct false rumor and misinformation. These behaviors have the potential to increase relationships of trust between emergency responders and members of the public.

Results show that making response efforts more visible presents opportunities for building public trust, especially if emergency responders display behaviors that make them appear trustworthy. Conversely, visibility can breed mistrust if emergency responders are not responsive or credible. Online media allow responder actions to be observed and accessed by a greater public audience than previously possible. This higher visibility then allows the public to hold emergency responders more accountable through increased public scrutiny (Hughes et al., 2014). Increased visibility also opens responders up to increased concerns around liability and their obligations to monitor and use online media (Low, Burdon, Christensen, Duncan, Barnes and Foo, 2010). Thus, many emergency responders are hesitant to create an online presence if they do not have the capacity to maintain it (Hughes and Palen, 2012). If emergency responders want to use online media as trust-building tools, they must consider how their online activity (or lack of activity) is seen by the public and work to foster the type of trust relationship they wish to build.

Findings also show that online media offer increased opportunities for emergency responders to engage with

members of the public and new ways of establishing, building, and maintaining relationships of trust. As new communication media become available, emergency responders must seek to understand these new media so they can best communicate and interact with the community they serve. Public information is necessarily shaped by the interactions that emergency responders have with members of the community.

Our analysis is limited in that we did not collect data from members of the public, therefore we could not determine the impact that responder actions and behaviors had on public trust (whether positive or negative). The next step in this research agenda is to develop methods and strategies for assessing the public's level of trust given the online communications of emergency responders. A long-term goal of this research would be to further refine these methods and strategies for real-time use. Accomplishment of this goal would allow us to design and build tools that would empower responders to systematically and continuously assess and readjust their communication strategies to improve public trust.

Trust Building Recommendations

From the findings in this paper, we offer nine recommendations for social media use by emergency responders wanting to build trust with members of the public. These recommendations correlate directly with the subsections found in the results section of this paper:

1. Supply timely and relevant information
2. Serve as a local authority for information in your domain
3. Cite others for information outside your domain
4. Report your ongoing response efforts
5. Make yourself publically visible online
6. Correct rumor and misinformation
7. Respond to requests from the public for information or help
8. Invoke a sense of community with the public
9. Adapt official procedures to address public needs

CONCLUSION

In this exploratory study, we examined how fire and police departments might use online media to affect the public's trust. Using Mayer et al.'s (1995) theory of trust, we make an initial contribution by showing how emergency responders can appear trustworthy to the public through demonstrations of ability, integrity, and benevolence. We also offer nine recommendations for how emergency responders can build trust using social media. Results from this study suggest that online media can serve as a valuable tool for emergency responders to establish, maintain, and build relationships of trust with the public.

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