Social Media: Force Multiplier, Capability Destroyer

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Emergency Management Research Methods/Analysis

Background

The impact that social media has had on the world around us is astounding. From instant messaging, to geo-location, to finding almost any person in the world in a few seconds, social media is a beneficial tool to people during everyday life. Since social media has such an impact on people, it is bound to have an impact on emergency management due to the fact that our field is heavily focused on dealing with people. My research on this topic was sparked and fueled by a seminar that I attended while at a United States Coast Guard Auxiliary University Program conference in Galveston, Texas. Retired Coast Guard Commander Joseph J. Leonard was the speaker at the seminar and was presenting about the response efforts during Hurricane Harvey that he had been involved in. During the seminar, a major topic that he focused on was the use of social media and how it was used during the response phase, the opportunities it created, and the limitations that it defined. When I learned about this assignment, I immediately thought of Commander Leonard and decided on the topic of how social media is changing response to emergency situations.

The research that I found dealing with emergency management, social media, and response had a large scope surrounding the topic, but I was able to narrow it down and apply it to my topic. Peterson (2014) starts us off with an overview of social media and emergency management. Peterson (2014) begins with the challenges surrounding social media and the different ways to address those challenges. The next topic Peterson (2014) touches on is the multiple ways that social media can and has been integrated into emergency organizations and practices. Finally, Peterson (2014) compares the different ideas from the perspectives of practice and research, while also addressing the best ways for the individual from those persectives to work together and proceed with the integration of social media into emergency management in

the future. The most interesting and insightful articles I read was Yates and Paquette (2011) dealing with the United States government and their response to the earthquake that struck Haiti in 2010. Yates and Paquette (2011) dive into the details of how the United States, United Nations, and other involved groups utilized socail media as the center of knowledge sharing between the groups during the response to the earthquake. Yates and Paquette (2011) cover the tactics that were used in response to the event in Haiti as well as the effectivenss and ineffectivenss that can occur due to the use of socail meida. Crowe (2011) focuses on the past few years of disaster history and how social media, if managed correctly, can be used as a tool to harness more information in response efforts after a disaster. Merchant, Elmer, and Lurie (2011) focus on the integration of social meida into the area of disaster preparedness. Merchant et al. (2011) is concerned with the aspects of communication between emergency professionals and the community while also identifying the benefits and limitations of social media. Latonero and Shklovski (2011) take an in depth look into response organizations and the the different social media technologies that are used, especially Twitter. Smilarly, Hughes and Palen (2012) focuses on the role of social media in emergency management, specifically, how it impacts the role of Public Information Officer (PIO). Lastly, Hiltz and Plotnick (2013) is concerned with the specific problem and solutions when dealing with an information overload from socail media.

The use of social media in emergency management is still being debated to this day. Although data is being gathered continuously at every turn and every incident, there is not an extensive amount of research dealing with the subject of social media. These factors are due to the fact that social media is generally a new concept only being gimplemented in the past decade. Another reason is the continual growth of social media and technology. It seems evevery year there ia a new breakthrough or advancement in one or both social media and technology leading

to confusion and obsolete tools. Lastly, just like all new changes, there is resistance due to fear and misunderstanding. The main arguments deal with privacy, unnecessary changes, and a general lack of knowledge.

Methods

While gathering information for this report, I researched many articles and conducted an interview with retired (ret.) United States Coast Guard (USCG) Commander (CDR) Joseph J. Leonard. Although retired, CDR Leonard is still very involved in emergency management and was very insightful into the topic of social media and emergency response. As I mentioned in the background, my central question of this research was, "How is social media changing response to emergency situations". CDR Leonard did a stellar job in not only answering my central question but providing me an extensive amount of information on my sub questions as well. The interview took place over the phone on April 20, 2018 and lasted approximately 30 minutes. I also sent the questions to CDR Leonard beforehand as to provide him with time to prepare his answers. I have outlined the questions that were asked during the interview below, but the complete interview protocol can be found at the end of the paper on pages 8-12.

The survey consisted of six questions including my central question. My first question for CDR Leonard dealt with his background experience. My next question asked what types of platforms are most used in emergency situations. The third and fourth questions asked what barriers surround social media and response and what improvements or ideas could benefit the use of social media and response. Lastly, I asked where I could find more information about my topic.

Results

CDR Leonard has been involved with the emergency management community for 37 years and has extensive history responding to disasters, making him an expert on the subject. Other than being a published author on incident management, contingency plans, and other programs related to emergency management; CDR Leonard also serves as a Domestic Preparedness Advisor, Chairman of the Greater Harris County Local Emergency Planning Committee and on the Central Texas Coastal Area Committee and Houston-Galveston Area Maritime Security Committee. CDR Leonard specializes as a Type 1 Incident Commander, Planning Section Chief, Operations Section Chief, and Liaison officer while sporting multiple other certifications as well. CDR Leonard has responded to over thirty disasters in his time with the United States Coast Guard and the State of Texas.

As discussed in the interview, every social media platform has pros and cons associated with it. CDR Leonard identified Twitter, Facebook, and LinkedIn as the most used platforms during response times. Because it is fast, capable of taking pictures, and able to use geo-location, Twitter can be extremely beneficial in disaster situations to identify places, events, or people that may be in harm's way (Latonero & Shklovski, 2011). Twitter can become a nuisance when you run out of space due to the 140-character limit on the information that is posted (Latonero & Shklovski, 2011). Although Facebook allows for faster messaging, larger messaging, and pictures, your contacts are limited to connections that already exist. Much like Facebook, LinkedIn does allow for fast and large messaging but requires previous connection and possibly a premium account. Although social media may require previous connections, every emergency manager knows that you cannot exchange business cards or information at the

disaster site (Latonero & Shklovski, 2011). You need to make connections in person and on social media before you need them (Latonero & Shklovski, 2011).

Social media can be a useful tool in a disaster if the if it is accessible (Yates & Paquette, 2011). Access can be denied due to policies within different organizations which can also limits access during incidents and events (Yates & Paquette, 2011). Another factor that can have an impact on social media availability is the systems and facilities being used (Yates & Paquette, 2011). Systems can sometimes be overwhelmed due to bandwidth requirements and high capacity use (Yates & Paquette, 2011).

When utilizing social media, one factor that must be acknowledged is that social media is almost immediate, but the ability to respond is not. An example that CDR Leonard told me was when he was responding during Hurricane Harvey. Social media messages were coming in about an animal shelter that was flooding. The responders did not have the resources or the time to respond to the animal shelter due to the fact that they were responding to a senior care facility that was also flooding.

According to my research and my interview, the greatest downfall of social media in response is the amount of information found compared to useable intelligence. Social media is overloaded with information whether you are dealing with an emergency situation or not (Hiltz & Plotnick, 2013). This information can easily become valuable intelligence if you have the people and resources to manage the information. This includes identifying a social media post, validating that is a reliable and trustworthy source, gathering all the facts, and delivering the information found to the decision makers and stakeholders (Hiltz & Plotnick, 2013). CDR Leonard identified that advancements in social media and the influx of information has forced him to work with a 15-person situation crew where, in the past, he only need 5.

Conclusions

When working in a disaster situation, the Public Information Officer (PIO) and his team can make or break the response (Hughes & Palen, 2012). The relationship between PIO and unit situation leader is a key critical component to any disaster situation (Hughes & Palen, 2012). A public information officer must have the ability to stay calm under pressure and also be able to discern what is information and what is intelligence to provide to the decision makers (Hughes & Palen, 2012). Not only do they deal with the influx of social media messages, but they also deal directly with the media that can frame the disaster in a positive or negative light (Hughes & Palen, 2012).

In conclusion, social media has changed response in emergency situations as we know it. As stated in the title of this paper, social media is a force multiplier but also a capability destroyer. As social media has expanded, it has become an overwhelming factor in emergency response. If managed correctly, social media can be an extreme tool that can guide you to respond promptly and efficiently. If not managed correctly, the monitoring, analyzing, and prioritizing of information can soon become a huge task that begins to pull other emergency responders away from the job that they were doing before. Although there are drawbacks to social media and its use in disaster response as we look to the future, more research on the topic of social media, more advanced technology, and more hands-on training will eventually provide us with enough knowledge to successfully harness this tool. An important factor for the future development of social media being used in emergency management is the collaboration of all emergency managers including researchers and practitioners (Peterson, 2014).

Interview Protocol

Project: Final Research Paper: Social Media in Emergency Management

Date: 20 Apr 2018

Time: 1330 – 1400 (30 Minutes)

Location: Telephone

Interviewer: Jayson Simmons

Interviewee: CDR Joseph J. Leonard, Jr. USCG (ret.)

Phone: (281) 992-7568
Email: jleonard83@aol.com

Notes to Interviewee:

- Thank you for your help! I am glad that you agreed to participate and know that your insights will be invaluable.
- Approximate length: 30 minutes, 6 major questions

Purpose of Research:

How is social media changing response to emergency situations?

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i. *What is your background experience?*

37-year veteran of the emergency response community at the federal, local, and private-sector level with emphasis on incident and emergency management, contingency planning, training, and exercises. Nationally recognized authority and published author on all-threat/all-hazard incident management, development of comprehensive contingency plans, and effective training and exercise programs for personnel at the federal, state, local, and private sector levels.

Serves as a Domestic Preparedness Advisor with DomPrep (www.domesticpreparedness.com). Actively serves as Chairman of the Greater Harris County Local Emergency Planning Committee and on the Central Texas Coastal Area Committee and Houston-

Galveston Area Maritime Security Committee.

Specialties:
All-Threat/All-Hazard Emergency Management and Response
--Type-1 Incident Commander
--Type-1 Planning Section Chief
--Type-1 Operations Section Chief
--Type-1 Liaison Officer/Agency Representative
Contingency Planning and Preparedness / Exercise Design and Development
--Master Exercise Practitioner (MEP)
--Master Continuity Practitioner (MCP)
--Certified Emergency Manager (CEM)
--Certified Homeland Protection Professional (CHPP)
--Certified Port Executive (CPE)

Response History

2015-2018—Center for Toxicology and Environmental Health

- *Senior Consultant / Resilient Risk Management*
- *2017 Mesquite Oil Spill (Type-3)—Planning Section Chief-200 responders (Bastrop, TX)—one week*
- *2016 Mosier Unit Train Derailment (Type-1)—Planning Section Chief-250+ responders (Mosier, OR)—two weeks*
- *2015 Dredge JN FISHER Sinking/Salvage (Type-3)—Incident Commander—70 responders (Galveston Bay, TX)—two weeks*

1987-2018—UNITED STATES COAST GUARD
Auxiliarist

- 2017 Hurricane Nate (Type-2)—Deputy Area Commander—350+ Responders (New Orleans, LA)—one week.
- 2017 Hurricane Harvey ESF-10 (Oil/HazMat) Response (Type-1)—Liaison Officer—1,000+ responders (Houston, TX)—two weeks.
- 2017 Hurricane Harvey (Type-1)—Planning Section Chief—1,800+ responders (Houston, TX)—one week.

Commander

- 2014 Ebola Virus Response (Type-1)—Deliberate Planner on National Crisis Action Team (USCG Headquarters / Washington, DC)—four weeks.
- 2014 Unaccompanied Alien Children Influx (Type-1)—Planning Section Chief (Unified Coordination Group at the

National Response Coordination Center)—Alien Migrant Interdiction/Sheltering/Processing Operation along US Southern Border (FEMA National Response Coordination Center / Washington, DC)—four weeks.

- 2014 Texas City "Y" Oil Spill (Type-1)—Planning Section Chief—688 responders (Matagorda, TX)—three weeks.
- 2014 State of the Union Address (Type-1)—ICS Advisor for National Special Security Event (Washington, DC)—two days.
- 2012 Conrail Derailment/HazMat Response (Type-2)—Deputy Incident Commander/Planning Section Chief—350 responders (Paulsboro, NJ)—three weeks.
- 2012 Hurricane Sandy (Type-1)—Area Planning Section Chief—3,500 responders (New York, NY)—two weeks.

Lieutenant Commander

- 2010/2012 MODU DEEPWATER HORIZON Oil Spill (Type-1)—Environmental Section Chief (Gulf Coast Incident Management Team); Branch Director (St. Bernard Parish, LA); Planning Section Chief (Galveston, TX)—48,500 responders—six months.
- 2010 M/V EAGLE OTOME Oil Spill (Type-1)—Deputy Operations Section Chief—1250+ responders (Beaumont, TX)—two weeks.
- 2009 M/V CHEMICAL SUPPLIER Oil Spill (Type-3)—Deputy Planning Section Chief and Liaison Officer—170 responders (Houston, TX)—one week.
- 2008 Hurricane Ike (Type-1)—Planning Section Chief and Liaison Officer—2,500+ responders (Houston, TX)—six weeks.
- 2007 Cotton Patch Bayou/Agrifos HazMat Incident (Type-3)—Liaison Officer and Deputy Planning Section Chief—100+ responders (Pasadena, TX)—two weeks.

Lieutenant

- 2005 Hurricane Rita (Type-1)—Planning Section Chief—1600+ responders (Houston, TX)—four weeks.
- 2005 Hurricane Katrina (Type-1)—FEMA Administrator-appointed Area Commander for Houston Mega-Shelter Operations following the evacuation from Louisiana—8,000+ responders, 80,000 volunteers, and 44,000+ evacuees sheltered in largest mass shelter operation in US history (Houston, TX)—three weeks.
- 2004-2005 Viking Petroleum Oil Spill (Type-3)—Unified Commander—80+ responders (Hitchcock, TX)—four weeks.

- 2002-2004 Operation PALADIN I, II, III, IV, and V Maritime Homeland Security Operations (Type 2/3)—Planning Section Chief—300 personnel, 35 cutters/small boats, 4 helicopters (Houston-Galveston-Freeport, TX)—five months.
- 2003 T/B NMS 1477 HazMat Incident (Type-2)—Planning Section Chief—120+ responders (Texas City, TX)—two weeks.
- 2003 Hurricane Isabel (Type-2)—Planning Section Chief/Deputy Incident Commander—300+ responders (Elizabeth City, NC)—three weeks.
- 2001 Tropical Storm Allison (Type-1)—Agency Representative to Harris County/Houston Emergency Management Office—5,000+ responders (Houston, TX)—two weeks.
- 1998 M/V KATANIA Ship Fire/HazMat Response (Type-2)—Unified Commander—200+ responders (Houston, TX)—two weeks.
- 1998 M/V ARKTIS SPIRIT Ship Fire (Type-3)—Unified Commander (Houston, TX)—two days.
- 1998 M/V RED SEAGULL Oil Spill (Type-3)—Planning Section Chief—80+ responders (Galveston, TX and Gulf of Mexico)—two weeks.
- 1998 Amoco Pipeline Oil Spill (Type-3)—Air Operations Branch Director—90+ responders (Texas City, TX and Gulf of Mexico)—three weeks.
- 1997 M/V STOLT SPIRIT Ship Fire (Type-2)—Unified Commander—350+ responders (Deer Park, TX)—one week.
- 1997 M/V KORNAT Ship Fire (Type-3)—Unified Commander—120+ responders (Morgans Point and Houston, TX)—two days.
- 1996 T/B BUFFALO 286 Oil Spill (Type-2)—Planning Section Chief—400+ responders (La Porte, TX)—four weeks.
- 1996 T/B BUFFALO 292 Oil Spill (Type-1)—Planning Section Chief—700+ responders (Galveston, TX)—six weeks.
- 1994 San Jacinto River Incident (Type-1)—Operations Section Chief—1,500+ responders (Houston and Baytown, TX)—six weeks.

1999-2002—CITY OF HOUSTON, TEXAS

- LEPC Administrator
- 2001 Tropical Storm Allison Recovery Operations (Type-2)—Incident Commander—300+ responders (Houston, TX)—two months.

ii. *What platforms of social media are most useful in response situations?*

Twitter—fast, picture capable, but minimal information due to number of characters (Has improved since Harvey). Ideal to have established linkages or contacts prior to incident or event, as response to "unknown" persons may be delayed over response to "known" persons.
Facebook: reasonable fast, picture capable, and greater ability to transfer info. Problem exists if striving to contact an entity you are not already friends with or following.
LinkedIn: much more limited due to requirements for either established contacts or upgrade to premium account in order to send more messages.

iii. *What are some of the barriers surround social media and response?*

Information vs Intelligence…we have lots of information (data) that is readily available if you are looking for it. We have much less capability (people, resources, etc.) to assess, analyze, and prioritize this information into useful or actionable intelligence that can be used by decision makers. There may be a useful computer tool to do this, but I am not familiar with one.

Another problem is lack of access to social media during responses…some entities do not permit access to social media during regular work (either thru policies or blocking actual sites) which also limits access during incidents or events.

iv. *What improvements or ideas do you think could be beneficial when dealing with social media and response?*

Increased ability to send information, such as the changes recently enacted by Twitter. Ease of access during incidents or events. Less bandwidth requirements to minimize opportunity for systems to being overwhelmed through high capacity use. Ability to better discern what is critical information and what is noise.

v. *Where might I be able to get more information about these topics?*

Social Media practitioners are typically found working for the Public Information Officer in the Joint Information Center. These skill sets (although not the people!) must be effectively transferred to both the Situation Unit in Planning and to the Information & Intelligence

Section. In addition, ICS training should convey a "dotted line" to highlight the critical value of sharing information in a timely manner.

References

Crowe, A. (2011). The social media manifesto: A comprehensive review of the impact of social media on emergency management. *Journal of business continuity & emergency planning*, *5*(1), 409-420.

Hiltz, S. R., & Plotnick, L. (2013). Dealing with information overload when using social media for emergency management: Emerging solutions. In *ISCRAM*.

Hughes, A. L., & Palen, L. (2012). The evolving role of the public information officer: An examination of social media in emergency management. *Journal of Homeland Security and Emergency Management*, *9*(1).

Latonero, M., & Shklovski, I. (2011). Emergency management, Twitter, and social media evangelism. *Using Social and Information Technologies for Disaster and Crisis Management*, 196-212.

Merchant, R. M., Elmer, S., & Lurie, N. (2011). Integrating social media into emergency-preparedness efforts. *New England Journal of Medicine*, *365*(4), 289-291.

Peterson, S. (2014). Social media and emergency management. *Critical issues in disaster management.*

Yates, D., & Paquette, S. (2011). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. *International journal of information management*, *31*(1), 6-13.