Beyond the "Social" in Social Media: Facebook as Communication Lifeline

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ABSTRACT

The Philippines' geographic location combined with poor infrastructure and widespread incidence of poverty makes its people highly vulnerable to risks. In the 2014 World Risk Report of the United Nations, the Philippines was ranked as the world's second most at risk to disaster. It was also the third most exposed to natural calamities in the world. But the Philippines, is also one of the world's biggest social media users. Filipinos spend an average of nearly four hours of their time using social media daily for various "social reasons" which include personal networking, surveillance, entertainment, or to simply fill up spare time. Wanting to be where the citizens are, local government officials have begun to tap Facebook to create their own online communities. Some have even integrated the social medium into their own risk communication network. Thus, Facebook is no longer just a social medium; it is now a communication lifeline. This paper explored the role of Facebook as a communication lifeline for the people of Cainta, Rizal during the onslaught of typhoon Mario on September 19, 2014. Specifically, this paper explored the role of Facebook as a crowdsourcing tool as well as looked into its affordances and limitations as a tool for risk management. For its framework, this study used Katz' uses and gratification theory as updated by Thomas Ruggiero to incorporate the Internet and its technological affordances. The theory explains the communication behavior of today's active media users who are goal directed, are actively utilizing media contents, and who know their needs and how to gratify them.

Keywords: Social Media, Risk Management, Risk Communication, Online Community Facebook Communication

INTRODUCTION

The Philippines' geographic location combined with poor infrastructure and widespread incidence of poverty makes its people highly vulnerable to risks.

In the 2014 World Risk Report of the United Nations, the Philippines ranked as the world's second most at risk to disaster. It was also the third most exposed to natural calamities in the world (UN World Risk Report 2014, p. 44).

Constantly at risk to destructive typhoons, monsoon causing flashfloods and landslides, earthquakes, severe droughts and even volcanic eruptions, Filipinos have found a new communication lifeline —via the social media.

The Philippines, dubbed as the "world's most social nation", is a society of "Facebook addicts." Social media users spend an average of nearly four hours a day using social media (Global Web Index 2014). Of the 44.2 million Filipino Internet users, 21% and 20% actively and regularly use Facebook and Facebook Messenger, respectively (We Are Social Singapore 2015).

Of these 42 million active social media users, 36 million are mobile users. Growing at a rate of 50% per annum, these mobile users could reach 54 million by the end of year 2016, making it a key driving factor for social media penetration in the country (We Are Social Singapore 2015).

Wanting to be where the citizens are, local government officials have begun to tap the social medium to create their own online communities. Some have even integrated the social medium into their own risk communication network. Thus, Facebook has ceased to be just a fun and leisurely social medium; it has become a communication lifeline.

This paper explored the role of Facebook as a communication lifeline for the people of Cainta, Rizal during the onslaught of typhoon Mario on September 19, 2014. Specifically, this paper explored the role of Facebook as a crowdsourcing tool as well as looked into its affordances, the needs of users it gratified as well as its limitations as a tool for flood risk management.

FRAMEWOK & METHODOLOGY

Social media are forms of electronic communication through which users create online communities to share information, ideas, personal messages and other content (White, 2012). Facebook is a social medium that allows for both real-time and asynchronous interactivity among users in a demassified and disintermediated communication environment.

With disintermediation, ordinary citizens are now empowered to choose their own communication platforms for their views, unobstructed by intermediaries. Disintermediation also enabled crowdsourcing—benefitting from the wisdom of the crowd—with the premise that information itself can be superior when it directly comes from individuals outside a particular setting, be it an online community or a real-life one (Webster, 2014).

Recent developments here in the Philippines and elsewhere, however, have shown that with demassification and disintermediation, the cyberspace had become even more unsafe with the presence of trolls, paid hacks and malicious bots dominating discourses in online public spaces. McNair (2006) describes this phenomenon as "cultural chaos" which he partly attributes to the destabilizing impact of digital communication technologies.

With asynchroneity, senders and receivers are now able to interact at their own convenience through messages they can read or view and respond to at different times. With interactivity, communication participants have become privileged not only with control over the communication process but also with the ability to exchange roles in their mutual discourse.

Demassification, a result of the increasing control users have over certain Internet-based media (Williams, et al., 1988 as cited in Ruggiero, 2000), has enabled audiences to experience mediated interpersonal communication.

For its framework, this study used Uses and Gratification (U&G) theory which views audiences not as passive media users acted upon by the media but as active media users (AMU). An important assumption of U&G theory on audience behavior is that media use is selective and motivated by rational self-awareness of the individual's own needs and an expectation that those needs will be satisfied by particular types of media and content (Katz, et. al., 1974 as cited in Ruggiero, 2000).

The AMU is assumed to be goal directed. They are largely responsible for choosing the type of media to meet their own needs. The media are considered to be only one factor contributing to how needs get met, and audience members are assumed to have considerable agency, that they know their needs and how to gratify these needs (Littlejohn & Foss, 2008, p.301).

Quoting Katz, et. al. (1974), Littlejohn & Foss (2008) summarized U&G theory as follows:

> Compared with classical effects studies, the uses-and-gratification approach takes the media consumer rather than the media message at its starting point, and explores his communication behavior in terms of his direct experience with the media. It views the members of the audience as actively utilizing media contents, rather than being passively acted upon by the media. Thus, it does not assume a direct relationship between messages and effects, but postulates instead that members of the audience put message to use, and that such usages act as intervening variables in the process of effects. (Littlejohn & Foss, 2008, p.301)

Facebook users are AMUs who understand the technological affordances of the Internet as a medium of their choice as well as the kinds of gratifications they could obtain from it. Such technological affordances that include interactivity, asynchroneity and demassification make the Internet, specifically the social media, a preferred communication platform for AMUs over traditional forms of mediated communication such as print, radio and television.

Internet citizens use social media to gratify their needs such as to stay in touch with friends, be updated with what they are doing, to stay up-to-date with news and current events, to fill up spare time, to find entertaining content, to share opinion, to share photos and videos, be where their friends are, to network with other people, to meet new people, and to share to others updates about themselves (Global Web Index, 2014).

Demassification enabled the creation of networks of small communities whose members share the same personal and surveillance needs. Interactivity, on the other hand, afforded individuals a multi-way communication line linked to each online community member.

By enabling one-to-many mediated communication, user generated content produced by each member of the online community is received by all members. Acting as network nodes, each member could also help amplify content through sharing. They may also choose to share the same content specifically to a member of the network whom they think should get the message.

The U&G theory offers a functionalist approach to studying mediated communication by providing a "means-end orientation" (Lin, 1996 as cited by Ruggiero, 2000) which makes it a suitable theoretical framework for this study.

In the theoretical level, an active media user could serve as an information hub to one's online community, which includes an organization. When the user shares content to the organization, all active media users in the same community also get the same content if one's privacy setting is public.

If the privacy setting of the organization is one that automatically allows friends to post, same content is automatically seen by everyone in the organization's network. In this process, content travels almost instantly from one active media user/network node to everyone subscribed to both the user's and the organization's online communities.

In the conceptual level, a social media user/network node could serve as an information hub to one's own social media community which includes a government disaster risk reduction and management office. When the user shares risk information to the social media community of the government disaster risk reduction and management office, all network nodes in the online community also get the same risk information if the setting is public.

If the privacy setting of the government disaster risk reduction and management office's social media account is one that automatically allows friends to post, same information is automatically seen by everyone in the

network. In this process, risk information spreads almost instantly from one social media user/network node to one's own social media community as well as to the government disaster risk reduction and management office's social media community.

In the operational level, a Facebook user /network node could serve as an information hub to one's own Facebook friends which include immediate family members, relatives, friends, classmates, officemates, acquaintances as well as the disaster risk reduction and management office of Cainta, Rizal (See Figure 1).
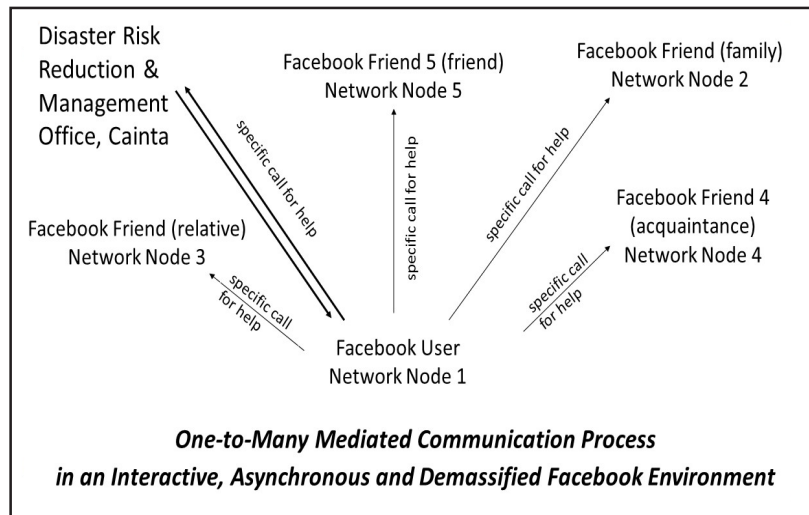

Figure 1 Cainta's Risk Communication Environment

When the user shares a specific call for help to the disaster risk reduction and management office of Cainta, all of the user's Facebook friends will get the same distress call if the privacy setting is public. This means that even before a disaster or rescue team could respond, the user's own online community is already alerted.

If the privacy setting of the disaster risk reduction and management office of Cainta's Facebook account is one that automatically allows friends to post, the same distress call will automatically be seen by everyone in the network.

What makes Facebook a superior technology-based communication media is its being highly collaborative and participatory. Its salient feature is a multi-way model of communication which allows for interactivity among all communication participants while enabling them to either single-handedly or collaboratively create and share content, blurring the line that separates the communication sender from the receiver. Facebook has democratized content creation and distribution, two communication functions which used to be confined to well-oiled institutions (Congjuico, 2015, p.23).

Social media afford users a virtual landscape mirroring familiar elements of real-life communities; linking people together in ways that resemble traditional feelings of connection where exchange of feelings and ideas and the reporting of experiences and actions are facilitated (Davis, 2013).

Unlike the traditional mass media, the Internet is a "vehicle for the provision of very specific high-value information to very specific high-consumption audiences" (Abrahamson, 1998, as cited in Ruggiero, 2000), such as members of smaller communities bound together by similar motivations and needs.

Social media give users more gratifications compared to what traditional mass media provide. They allow users to create their own communities or join communities of their choice where their needs and motivations are best gratified. Online communities are small in size and members share similar needs and motivations (Congjuico, 2015, p. 24).

Social media allow emergency management to utilize networked individuals to function as "refined node of information" of a bigger and more organized risk management communication program (Grieb in White, 2012). Online communities are "a gold mine", the greatest resource of untapped information for social media and emergency management (White, 2012).

Social media users provide useful information from the ground which response teams need to establish clear operational picture. Lack of accurate information from the ground slows down the deployment of effective resources into the disaster area which could result in delays in the overall recovery as well (Westbrook in White, 2012).

As tools for the delivery of critical information to and from the people, the power of social media lies not only on their speed and cost-effectiveness but also on their power to amplify messages through sharing (Congjuico, 2015, 25).

When disaster strikes, a strong sense of community is awakened among members and they turn to their respective online communities or "virtual gathering spaces" for information seeking and sharing (Palen, 2007). They feel the need to communicate with one another not only to seek help and support but also to share updates, to share feelings and experiences, to check on the situation of family and other members of the community, and to offer help where and when possible like what real-life communities do (Congjuico, 2015, p25).

A review of related literatures including academic journals, surveys, and gray literatures was conducted. A textual analysis using qualitative and quantitative analysis was also undertaken on all recorded messages posted in Cainta's Facebook account dedicated to risk reduction and management.

This research used both qualitative and quantitative approaches, and used grounded theory method by Glaser and Strauss. The theory views both data and analysis as social construction and takes into account the conditions of their production. In this method, data collection and analysis occur simultaneously, with each informing the other (Thornberg & Charmaz, 2012).

Grounded theory method is an inductive, iterative, interactive, and comparative process. It is particularly helpful for studying individual, social, and organizational processes as well as research participants' actions and meanings (Charmaz, 2006 as cited in Thornberg & Charmaz, 2012).

Textual analysis is a research method used to describe and interpret the characteristics of recorded or visual messages. Textual analysis is best suited if the objective is to describe the content, the structure and functions of the messages contained in texts. Content analysis, on the other hand, is used to identify, enumerate, and analyze occurrences of specific messages and message characteristics embedded in texts (Frey & Kreps, 1999).

RESULTS AND DISCUSSION

From the year 2012 until 2013, the Philippines battled a series of destructive hydrological hazards which caused massive flooding and storm-surges. These affected over four million Filipinos and killed more than 10,000 (National Disaster Response Plan for Hydro-Meteorological Hazards, 2014).

The following year, on September 19, 2014, typhoon Mario (Fung-Wong), which affected 453,443 families in 27 provinces nationwide, flooded most of urban Metro Manila and nearby municipalities, including the small and highly urbanized municipality of Cainta, Rizal. It affected 5,330 families or 22,191 residents of Cainta, Rizal. Of these, 3,807 families or a total of 14,987 individuals sought shelter in 26 evacuation centers (NDRRMC, 2014).

During the town-wide flood, the affected citizens of Cainta found a way to connect with the local government's disaster risk reduction and management team— thru Facebook.
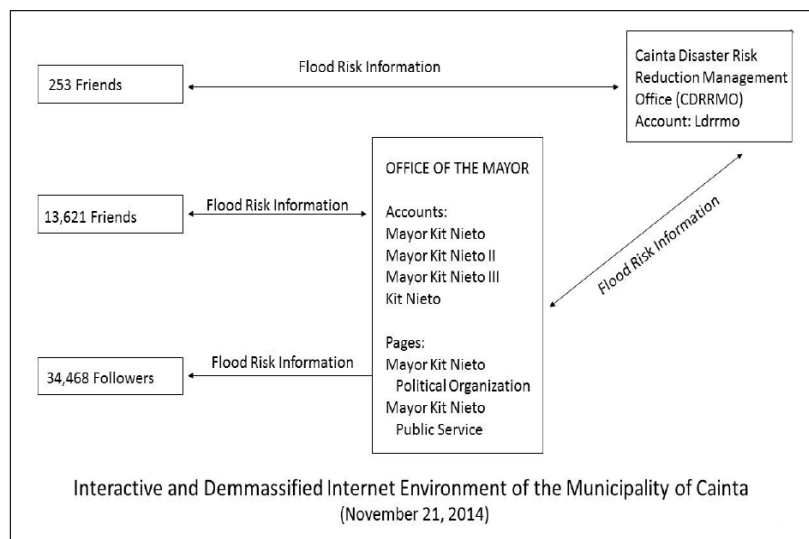

Figure 2: The Facebook Community of the Municipality of Cainta

The town mayor, Johnielle Keith "Kit" Nieto, who leads the town's disaster team, maintains four accounts: the *Mayor Kit Nieto* account with 4,993 friends and 23,860 followers, the *Mayor Kit Nieto II* account with 4,935 friends and 6,964 followers, the *Mayor Kit Nieto III* account with 3,605 friends and 3,644 followers, and the *Kit Nieto* account with 88 friends and no following, as of Nov. 21, 2014.

All four accounts carry the same messages, which makes it unlikely for friends and followers to hook up to more than one account as this would be redundant (Nieto, Personal Communication, 19 November 2014). In all four accounts, the local chief executive has a total of 13,621 friends and 34,468 followers.

Why the Mayor has four accounts instead of a single big account can be traced mainly to the mayor's limited understanding of the features of Facebook when he first used it. Wanting to separate his personal account from a public account, he ended up creating four different accounts. He said: "It never occurred to me that you can just become a follower. I am not a techie guy. I am just on a need to know basis." (Nieto, Personal Communication, 19 November 2014). A follower of a Facebook Page need not be a friend of the account owner but would still be receiving all information posted.

At the time of the disastrous flood in Cainta, Facebook was yet to launch its Safety Check feature, which was announced by Facebook Chief Operating Officer Mark Zuckerberg via his Facebook account on October 16, 2014. The Safety Check feature enables individuals in disaster-affected areas to report their condition to Facebook for the information of people who wish to find out how they are.

As of November 2014, the Mayor had already opened two Facebook Pages titled "Mayor Kit Nieto Political Organization" with 4,534 likes and "Mayor Kit Nieto Public Services" with 7,609 likes. In both Pages, the people are not allowed to make posts and comments but could only do likes and shares. The Pages did not have Facebook Safety Check feature. The Facebook App for Public figures was introduced only on July 17, 2014 (newsroom.fb.com, 2014).

Judging on the nature of concerns and on the command of the English language of those who participated in the Facebook conversations, both in the form of posts and comments, many members of the town's online community on Facebook are seemingly well educated. The Mayor himself believes most of them are middle class, specifically the working class.

Of the 311,845 people of Cainta (Philippine Statistics Authority 2013), only 4.4% are Mayor's Facebook friends and 11.10 % are his followers. However, if only the total number of registered voters is to be considered, out of the 120,000 registered voters (Nieto, Personal Communication, 19 November 2014), 11.40% and 28% of the voters of Cainta are his friends and followers, respectively— assuming everyone was honest in declaring their age on Facebook and that all of them are residents of the Municipality of Cainta.

Majority (or 60%) of Cainta's people live in suburban villages, 10% live in the barrios and 30% are informal settlers (Nieto, Personal Communication, 19 November 2014). With these demographics, the local chief executive is confident he is able to reach a good majority of his people through Facebook.

The Mayor's account reached this level of estimated Facebook penetration despite the absence of a formal communication program or campaign aimed at attracting more residents to be part of his online community. As people learned about his account, they sent friend requests and he would just accept them. It is possible, however, that not all his friends and followers are registered voters or residents of Cainta (Nieto, Personal Communication, 19 November 2014).

Aside from informal settlers in danger zones, Cainteños living in suburban villages with more properties such as motor vehicles and appliances at stake are often the hardest hit during town-wide floods. Cainta's waterways and drainage systems traverse through villages exposing houses to floods after heavy rains (Nieto, Personal Communication, 19 November 2014).

The increase in the Facebook following of Mayor Nieto was a direct result of the need of the residents of Cainta for hyper local and high value information such as on class suspensions and updates on calamities. A rapid appraisal conducted by this author showed that prior to the floods in previous years, many became aware of the social media accounts of the local government only when they were already at the height of the flood calamity

because they received shares of posts from Facebook friends who are hooked up to the Mayor's accounts.

Today, Facebook is the Office of the Mayor's official and personal communication tool. It is the main communication tool he uses to move his people or getting them to participate in official activities. On Facebook, he said he is able to tell his people exactly what he wants them to know, "subtly, directly and indirectly." Subtly and indirectly, especially when the person on the other end is clearly displeased or upset (Nieto, Personal Communication, 19 November 2014).

Crowdsourcing for Risk Managers

Users of social media provide information from the ground, the very critical information emergency managers and disaster response teams need for situational awareness that help in establishing clear operational picture. Lack of situational awareness not only slows down the deployment of effective resources into the disaster area, but delays the overall recovery as well. Information from social media, when juxtaposed with reports from trained first responders, provides a much-improved operating picture (Westbrook in White, 2012).

As a communication platform, Facebook became helpful for Cainta's disaster team when cellular sites and their radios were down due to infrastructure damage. At the height of the disaster, the Mayor said he "got the pulse of the people in need at any particular point in time" (Nieto, Personal Communication, 19 November 2014).

The Mayor regularly posts on Facebook flood-risk related information such as those on drainage clean-up and river and creek dredging as part of the town's preparedness program. This resulted to more requests coming from the people. He narrated:

> They got to realize, this creek at the back has many informal settlers. This creek here needs to be dredged. Our street drainage is now overflowing. So, let's tell the mayor about it so he can send a team to clean it. That's how I dispatch my team every day. On top of the "thank yous" for yesterday's work, there's a request for tomorrow's work (Nieto, Personal Communication, 19 November 2014).

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How he was alerted of the flood disaster early in the morning of September 19, 2014, however, was not with the help of Facebook but through short messaging system (SMS) or texting. On that particular morning, he said he woke up to non-stop SMS flood alerts from some of the 3,000 employees of Cainta.

At 5:23 AM, he put out his first post on Facebook convening his disaster team. A few minutes after, flood reports started coming in from all parts of Cainta. At 5:42 AM, a citizen reported of widespread flood at St. Francis Village; a minute later a report came from the Floodway area; followed by reports from Balanti, San Isidro, Bayanihan, St. Joseph Subdivision, Karangalan, Don Mariano Ave., Midtown, and Felix Ave.

These prompted the Mayor to declare on Facebook a town-wide flood disaster at exactly 6:12 in the morning.

Citizens' Post

Of the total 27 posts citizens made, 12 (44.44%) were reports on floods and eight were calls for rescue. These immediately gave the disaster management team a clear picture of the floods in each area (see Table 1).

Table 1. Categories of citizens' posts

Road Inquiry	Office/Class Suspension Inquiry	Citizens' Message to Community	Citizens' Flood Risk Report	Citizens' Emergency Calls	Total
4	1	2	12	8	27
14.81%	0	7.4%	44.44%	29.63%	100%

Aside from posting images of floods in their areas, citizens described the depth of the flood in their areas using either their body parts or the structures around them, i.e. *hanggang tuhod* (knee level), *hanggang baiwang* (waste-level), *lubog na ang tao* (the height of an average person), *abot na sa* second floor (up to the second floor) or *lubog na ang bubong ng mga bahay* (roofs already submerged).

Some of the emergencies specified were rescues at Parola in Dulo Buli and in Gruar since water in these areas had already reached the second floor of houses; a call for evacuation from DM6 of an elderly with cancer; rescue from fast-rising water at Gongora, Rodfer 2 and Nursery-Corinthian in San Roque; and the need for food at Tanglaw and Felix for people could no longer cook due to the flood.

This study also checked for messages written in all capital letters (all caps) which is not a standard sentence structure and mostly associated with the writers' state of mind and emotion. On the Internet, this means the writer is shouting and is generally regarded as unacceptable behavior except when the message is a positive one.

Of the 109 posts with text, only four were all in capital letters, which included captions of photo albums the disaster risk reduction and management office of Cainta posted for information dissemination.

Facebook not only provided the citizens of Cainta a direct communication lifeline to the rescue team but also directly linked them up with their local chief executive, who wasted no time in acknowledging their calls for help and in immediately posting emergency response updates.

Citizens' Comments

Of the total 2,763 comments, 2,216 (80%) are flood risk related. At least 11 comments did not have any message while 29 comments are tags—a Facebook feedback mechanism that allows users to share a thread to another user by simply inputting the other's user accounts name into a comment in the same thread. An empty comment appears when a user opens the comment button then presses the enter button without writing in the comment box.

A great majority of the 2,723 comments are in text format (94.71%), followed by images with text (4.30%), images only (0.95%), and a video (.04%). In many of the reports from citizens on flooding in their areas, images accompanied by texts were sent. In some instances, they failed to give descriptions of the images they have sent. Texts accompanying images would have made reports from the ground more useful for the disaster team.

The only video posted in the comment threads was not even a report on the flood disaster that happened on Sept. 19, 2014 but a link to a 3-minute, 30-second video of the Mayor being interviewed in *Unang Hirit*, a local morning television show on GMA Network, uploaded on YouTube on Sept. 22, 2014, three days after the flood disaster.

In the video, the Mayor gave an update of what happened during the town-wide flood disaster to a wider audience. It also became useful as a post-disaster report to the online community of Cainta and supplemented the long reflection post, titled "Random Thoughts on What We Have Been Through", written and uploaded by the Mayor two days after the town-wide flood.

On the day of the disaster, the top post in terms of number of comments from the residents is post #47 (Robinson's and Sta. Lucia malls tapped for emergency parking) with 121 comments— a clear indication that a significant number of the online community of the mayor owns motor vehicles. This should not be surprising considering that 60% of the town's population live in suburban subdivisions (see Table 2).

Table 2: Posts with most comments on disaster day

Rank	Post #	Date	Time	Source	Comments	Category	Topic
1	47	19-Sep	9:29am	Nieto	121	Risk	Robinson's & Sta. Lucia Malls tapped for emergency parking
2	36	19-Sep	6:25am	Nieto	78	Risk	Residents told to post emergency requests in the same, opened thread
3	29	19-Sep	5:23am	Nieto	76	Risk	All disaster units alerted to convene in the municipal hall in 15 minutes
4	30	19-Sep	6:09am	Nieto	70	Risk	Residents told to stay home. Ortigas & Don Mariano Marcos flooded

Rank	Post #	Date	Time	Source	Comments	Category	Topic
5	81	19-Sep	9:42pm	Nieto	70	Risk	Update on evacuation areas already been served with food
6	80	19-Sep	8:41pm	Nieto	66	Risk	Food delivery in K a r a n g a l a n hampered; rescue trucks cannot penetrate
7	68	19-Sep	3:29pm	Nieto	63	Risk	Update: Rescue team in Youngstown now
8	59	19-Sep	12:38am	Nieto	57	Risk	Flood advisory: Strong current; backhoe to be replaced by pump boats
9	56	19-Sep	12:20pm	Nieto	57	Risk	Areas where power was cut announced, residents asked to post request
10	61	19-Sep	1:25pm	Nieto	55	Risk	Update: Just dispatched rescue help from military, red cross announced

Emergency Calls

A total of 111 emergency calls were received by the Mayor via his Facebook account. A great majority of these, 103 (93%), were comments in posts and only eight were posts on his Facebook wall.

A vast majority or 96 of the 103 emergency messages were calls for rescue from the rising flood waters. Other kinds of help specified by the residents were the need for food, ambulance to evacuate the sick and elderly, the urgent need to cut electricity supply to keep residents from getting electrocuted as the flood was rising so quickly, the need for a higher ground for parking in places such as the Robinsons and Sta. Lucia mall, and the need to urgently de-clog waterways to keep water from inundating houses (see Table 3).

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Table 3: Types of citizens' emergency calls

Rescue	Food	Ambulance	Cut Power	Parking	De-clogging	Total
96	5	4	3	2	1	111
86.49%	4.50%	**3.60%**	2.70%	1.80%	0.90%	100.00%

Sorting of emergencies on Facebook and dispatch decisions are made by the Mayor. As soon as an emergency call pops up on his screen, he writes this on the white board. The call is quickly verified by a team outside his office. If the call is valid, a team is quickly dispatched. The emergency caller is immediately informed via Facebook about the dispatch.

Some 13,000 residents were rescued by the town's 26 rescue teams (Nieto, Personal Communication, 19 November 2014).

The government likewise delivered food rations to affected areas, particularly at Karangalan area, which, as announced on Facebook at past 9:00 AM, had also become impenetrable by trucks.

The Mayor acknowledged that Facebook played an important role in gathering emergency calls but admitted that at the height of the floods, there came a time when they had stopped giving hope of immediate rescue to the people as flood waters had become too deep even for their rescue trucks to get through.

In his report to the people of Cainta on Facebook, the Mayor said:

I communicated with all texters, Facebook posters, and landline callers. As we were able to respond to five calls, 10 more would come, virtually making it impossible to cover all at the same time. Just the same, I made sure they knew that the government was listening and will do what it can to address their needs. We did for the most; we attempted for the rest (Nieto, Personal Communication, 19 November 2014).

Lessons learned

Drawing lessons from his experience with typhoon Mario, the Mayor has realized the importance of getting more residents, including his disaster teams, to connect to his Facebook account. He said:

> I will have to make sure that most of my people, on top of the residents, will be able to hook up to my account at every point in time during the calamity while doing work. The task will become easier because, if all disaster workers are hooked up to me, they will know exactly where to stand (Nieto, Personal Communication, 19 November 2014).

The Facebook flood reports also helped the Mayor create a flood map of the whole town of Cainta which his government needed in designing a P180 million proposed major underground waterways project. The said project has already been presented to the Department of Public Works and Highways (DWH) and is awaiting approval and budget allocation from the national government.

The Mayor also plans to set up two satellite disaster centers, one in Floodway and another in Balanti so that equipment will not have to be trapped in the municipal hall whenever Don Mariano and Ortigas become impassable. The said centers will also have Facebook access. He explained:

> Because even if we have 40 radios and we are able to exchange information, what about the people? What about the 120,000 registered voters to whom we are accountable? We cannot provide 120,000 radio equipment for them. And if our antennas fail, then we lost communication (Nieto, Personal Communication, 19 November 2014).

Technological and Social Affordances

Facebook affords users a high degree of social presence, making it a perfect tool for creating and nurturing small online communities of information empowered individuals.

Being a multi-way communication platform, Facebook enabled the citizens of Cainta to listen to one another and to support and encourage each other.

On the day of the disaster, the hotline number of the town which one citizen requested became the most shared post. Some 238 jumped at the opportunity to be of help by spreading the hotline number to their own community (see Table 4).

Table 4: Top 10 post with most shares

Rank	Post #	Time	Source	Shares	Topic/Message
1	52	10:53	Mayor	238	Cainta's mobile hotline number posted
2	47	9:29	Mayor	216	Robinson's & Sta. Lucia malls tapped for emergency parking
3	30	6:09	Mayor	174	Residents told to stay home; Ortigas & Don Mariano Marcos flooded
4	59	12:38	Mayor	165	Flood advisory: Strong flood current; rescue backhoe replaced by pump boats
5	56	12:20	Mayor	88	Areas where power was cut announced; residents asked to post request
6	61	13:25	Mayor	57	Update: Just dispatched rescue help from military, Red Cross
7	34	6:20	Mayor	56	Update: Rescue truck now in Caprice Village East; all major streets knee deep
8	37	6:46	Mayor	46	Update: Rescue truck now in Dulong Parola; Caprice; Imelda Ave not passable
9	40	7:39	Mayor	39	Dispatch Update: Gruar boat; Camden, fire truck; M. Javier, cargo truck

Rank	Post #	Time	Source	Shares	Topic/Message
10	54	11:21	Mayor	32	Advisory: Already sought help from NDRRMC for more boats, trucks

With the help of Facebook, meals which were normally served in evacuation centers were brought in a *banca* to groups of people trapped by the floods in their localities.

Requests from citizens caught in floodwaters on the road also prompted the Mayor to use his calamity emergency power to open the parking spaces of two big shopping malls in Cainta. This update from the Mayor gained the highest approval from citizens with 1,690 likes (see Table 5). It also became the second most shared by the citizens to their own respective online communities.

Table 5: Top 10 post with most likes

Rank	Post #	Time	Source	Likes	Topic/Message
1	47	9:29	Mayor	1690	Robinson's & Sta. Lucia malls tapped for emergency parking
2	61	13:25	Mayor	849	Update: Just dispatched rescue help from military, Red Cross
3	81	9:42	Mayor	685	List of evacuation areas already served with food
4	29	5:23	Mayor	621	All disaster units convene in the municipal hall in 15 minutes
5	30	6:09	Mayor	543	Residents told to stay home; Ortigas & Don Mariano Marcos flooded
6	52	10:53	Mayor	513	Cainta's mobile hotline number posted
7	59	12:38	Mayor	509	Flood advisory: Strong flood current; rescue backhoe replaced by pump boats

Rank	Post #	Time	Source	Likes	Topic/Message
8	54	11:21	Mayor	487	Advisory: Already sought help from NDRRMC for more boats, trucks
9	80	8:41	Mayor	468	Food delivery in Karangalan hampered; rescue trucks cannot penetrate
10	36	6:25	Mayor	461	Residents asked to post emergency requests in the same just opened thread

The citizens of Cainta used Facebook to report on flood situations in their area. This helped the risk reduction office come up with real time and clear picture of the disaster. It also helped the Mayor to declare a town-wide flood in just a matter of minutes without even having to conduct ocular inspection of the town. It was also able to release flood updates and road safety advice based on citizens' reports on Facebook.

Social Media Feedback

Social media traffic started low on Sept. 16 to Sept. 17 and suddenly peaked on the day of the town-wide flood on September 19, with total likes reaching 12,076; shares reaching 1,416 and comments reaching 1,313 in a day (see Figure 3).
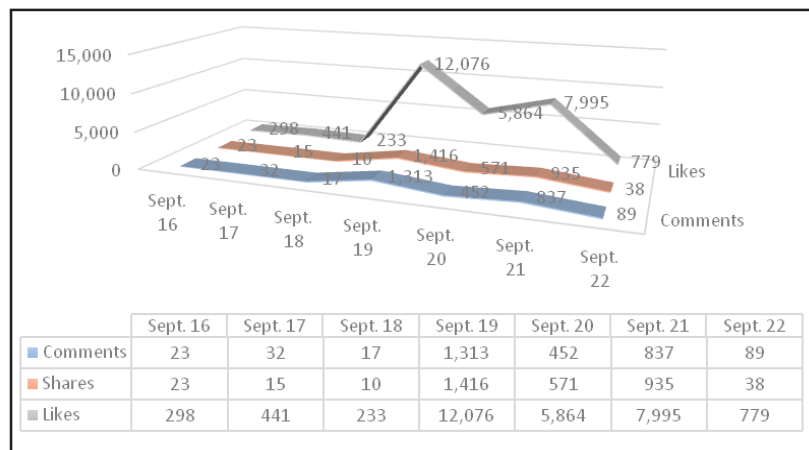

	Sept. 16	Sept. 17	Sept. 18	Sept. 19	Sept. 20	Sept. 21	Sept. 22
Comments	23	32	17	1,313	452	837	89
Shares	23	15	10	1,416	571	935	38
Likes	298	441	233	12,076	5,864	7,995	779

Figure 3: Social Media Feedback

On the day of the town-wide flood, the top post in terms of number of comments from the residents was post #47 (Robinson's and Sta. Lucia malls tapped for emergency parking) with 121 comments (see Table 6). Most of the comments in this thread were either words of commendation or gratitude to the Mayor.

Table 6: Top 10 post with most comments

Rank	Post #	Time	Source	Comments	Topic/Message
1	47	9:29	Mayor	121	Robinson's & Sta. Lucia malls tapped for emergency parking
2	36	6:25	Mayor	78	Residents asked to post emergency requests in the same just opened thread
3	29	5:23	Mayor	76	All disaster units convene in the municipal hall in 15 minutes
4	30	6:09	Mayor	70	Residents told to stay home; Ortigas & Don Mariano Marcos flooded
5	81	9:42	Mayor	70	All evacuation areas already served with food
6	80	8:41	Mayor	66	Food delivery in Karangalan hampered; rescue trucks cannot penetrate
7	68	3:29	Mayor	63	Update: Rescue team in Youngtown now
8	59	12:38	Mayor	57	Flood advisory: Strong flood current; rescue backhoe replaced by pump boats
9	56	12:20	Mayor	57	Areas where power was cut announced; residents asked to post request
10	61	13:25	Mayor	55	Update: Just dispatched rescue help from military, Red Cross

A day after the floods, on Sept. 20, 2014, social media feedback traffic dropped by more than half of likes, by almost a third for shares and roughly by a third for comments only to pick up the following day after the posting of the town Mayor's reflection which had the highest number of likes, shares and comments among all posts made during the week of the disaster.

The above is a clear indication that Facebook is a powerful tool for citizen engagement and participation in online community conversations.

Amplified conversation platform

For the Mayor, Facebook is his medium of choice because it allows him to engage in conversations with his people, his friends on Facebook in particular, while making these conversations also visible to all of his other followers. He said: "You only need to write once and you're already talking to some 30,000 people" (Nieto, Personal Communication, 19 November 2014).

Social media, Facebook in particular, enabled the government risk managers of Cainta, Rizal to create a "network of networks" of Cainteños, which are all "refined node of information" (Grieb in White 2012) from which and through which risk information either emanated or disseminated.

The Mayor likened his Facebook disaster response formula to a telenovela, a drama series aired on television. He said:

> There's a particular cry for help, there is a particular promise that government makes, there's a particular dispatch that the government makes, and there's a particular solution or resolution that government is able to effect. And the ending there is the token of gratitude coming from the recipient or a third party telling us that we were able to solve a problem (Nieto, Personal Communication, 19 November 2014).

Drama is a key element in the success of the Mayor's Facebook accounts in terms of generating interest which translated into a huge following, thereby expanding its reach for information dissemination. He said:

When they are reading into the threads, they get entertained, they get informed, they get angry because of lack of response, and they empathize with victims (Nieto, Personal Communication, 19 November 2014).

Today, t. He said: "*Kung hindi dahil sa* Facebook, *patay na ang career ko ngayon* (If not for Facebook, my career would have ended by now) (Nieto, Personal Communication, 19 November 2014).

Technological and Social Limitations

The government of Cainta has a separate Facebook account for risk reduction and management, the *Ldrrmo Cainta* account managed by the Cainta Municipal Disaster Risk Reduction and Management Office (CDRRMO). Ldrrmo stands for Local Disaster Risk Reduction Management Office.

However, the abovementioned account which regularly provides flood risk-related advisories and pronouncements sourced from the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the province of Rizal, has not generated much interest from the people of Cainta. As of November 21, 2014, it only had 253 friends and no following at all.

Big Facebook following is with the accounts of the Mayor, who also serves as the overall head of the town's disaster management team.

Because the accounts are the Mayor's personal accounts, the use of Facebook by the government of Cainta is not part of a carefully-planned institutional risk communication program. The local government does not even have a team which carefully crafts and designs flood risk management-related content.

An intimate communication line

While he recognizes the value of eventually institutionalizing the use of Facebook in other local government contexts, the Mayor is not ready to do the same in Cainta.

Drawing lessons from the reported failure of PAGASA to attract more following on its Facebook account because it is perceived to be too scientific, too technical and too impersonal, Nieto said:

> You cannot have a heart in there (Facebook conversations), if you use institutions. For me, being spontaneous is actually being sincere enough. You try to formalize things and your moves will become too politicized and calculated, inhibiting you from thinking outside the box (Nieto, Personal Communication, 19 November 2014).

Explaining why he uses his personal accounts and not an official government account, Nieto said:

> The culture of the Filipino is personality-oriented. They would rather appreciate getting information from you (their leader), from your personal account. So, I follow that path (Nieto, Personal Communication, 19 November 2014).

The Mayor feels a strong sense of ownership of the online community. He refers to his use of Facebook as his "love affair" with the residents of Cainta. "It (use of Facebook) is something that I want very spontaneous. Whether I rise or fall, I am with my people," the Mayor said (Nieto, Personal Communication, 19 November 2014).

Communication skills hurdles

While Facebook may be a very user-friendly medium, its use in communicating with people from all walks of life, trolls and real-world enemies included, requires a high level of communication skills. The mayor has this advice to share:

> If you are a Facebook user and you want it to be your medium, make sure you write well. Make sure you can psyche people up. How can a message be written in such a way that you don't irritate your audiences, that they don't feel slighted, that they understand your message? It is not that simple (Nieto, Personal Communication, 19 November 2014).

Many of the residents' cries for help or calls for emergency in the form of posts and comments on the wall of the Mayor are not specific enough such that complete address of the person in need of help and the kind of help needed are often not included.

Communicating on Facebook requires not only a good command of either the Filipino or English language but also the ability to recognize other people's sensitivities and limitations, as opined by Nieto. Being a politician, he also attracts trolls making it imperative on his part to know when to engage in or to ignore the conversation.

Trolls are products of online disinhibition effect resulting from dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority" (Suler, 2004).

They are not necessarily haters but are there to provoke or to pick a fight with the account owner or with anyone in the online community. Trolls become dangerous when they get in the minds of gullible individuals who allow themselves to be controlled and driven to harm themselves or others.

Netlingo.com (2015) classifies trolls into four types:

1. Playtime Trolls - an individual plays a simple, short game;
2. Tactical Trolls - a more serious troller who creates a credible persona to gain confidence of online users and then provokes strife in a subtle and invidious way;
3. Strategic Trolls – involves a very serious troller or group of trollers who plan and execute a strategy in months or even years just to be able to invade a list; and
4. Domination Trolls — where the trollers' strategy extends to as far as creating and running of apparently bona-fide mailing lists.

A recent study confirmed that trolls do thrive on the Internet and have turned the virtual space into their "playground." Same study, which set to investigate the possible link between trolling behavior and the "Dark Tetrad" of personality traits: narcissism, Machiavellianism, psychopathy and sadism, found out that cyber-trolling appears to be an Internet manifestation of everyday sadism (Buckels et al., 2014).

Trolls observed on the Facebook walls of the Mayor are playtime trolls who appear sporadically and do not stay long in the conversation. Commenters who made unreasonable requests, i.e. requesting for *banca* to get to work, or asking the same question again and again to annoy others may also be considered as trolls.

A very high social presence

Because Facebook is a social medium, its very nature is also its limitation.

In an attempt to organize and simplify sorting of messages from the ground, the Mayor started a thread and requested everyone to post only emergencies. Many of his friends and followers still posted non-risk comments including messages of encouragement and compliments for the mayor despite admonishment from other commenters.

Facebook afforded the Mayor a very high degree of social presence to his online community. Social presence refers to an individuals' awareness of the presence of other individuals with whom he could interact (Short et al. 1976).

With Facebook, the residents of Cainta had become empowered to interact not only with everyone in the online community but also with the highest leader in town, regardless of their economic and educational background.

This also resulted in very long comment threads which inevitably would digress from the topic of the original post or sometimes would branch out into other unrelated topics.

And because belated comers do not read through the long thread, they often make inquiries or seek clarifications on matters that have already been answered and clarified. Often, the same question from different individuals appears several times in the same thread which would eventually irritate others engaged in the conversation thread.

Some posts with long comment trends even tended to show a pattern consistent with Godwin's Law, a theory brought forth in 1990 by American lawyer and author Mike Godwin. He theorized that as an online discussion progresses, it becomes inevitable for someone or something to be eventually compared to Adolf Hitler or the Nazis, regardless of the original topic (Oxford Dictionary, 2012).

In today's broader application of the theory, Godwin's Law is observed when the conversation level starts to degrade and commenters start to verbally attack one another. When this happens, other commenters start to leave the thread and this signals the beginning of the end of the said thread.

On the Facebook wall of the mayor, it was observed that some commenters have low tolerance for repetitive inquiries and clarifications. Some also do not hesitate to come to the defense of the town mayor when they sense that a troll, a basher or hater is also in the loop.

Of politics and personal favors

According to the Mayor, he encountered challenges not much on the volume of requests on Facebook that he had to make decisions on but on deciphering which among those requests truly deserved to be addressed by their already overwhelmed disaster rescue team.

The Mayor is aware that for many residents of Cainta, he is not just their local government leader, but is also a friend, a political ally, and a family member responding to their calls for help.

He regretted that, "sometimes they just want to be fetched by a *banca* to get to work or just to be able to see situations in other places" (Nieto, Personal Communication, 19 November 2014). In the Philippines, these people are called "*uzis*", short for "*usisero*" or kibitzers, the interfering onlookers.

CONCLUSION

When disaster strikes, a strong sense of community is awakened among members and they turn to their online communities or "virtual gathering spaces" for information seeking and sharing (Palen 2007).

On the day of the onslaught of typhoon Mario on Sept. 19, 2014, Facebook served both the citizens and the risk reduction office of Cainta, Rizal well. The citizens found a new communication lifeline and were able to provide the government firsthand information from the ground.

Risk management, on the other hand, was able to gather real time risk information from affected citizens and was able to provide quick and effective solutions as suggested by the citizens themselves. Real time feedback, approval or disapproval, on government actions were also received by the risk management team in the form of social media feedback which included shares, likes, and comments.

Facebook gave ordinary people a voice and a direct line to no less than the leader of their town who is also the head of the town's risk management office. The social medium, a one-to-many communication platform, not only amplified risk information but also made it instantly available to everyone on the network.

Facebook, being a very inclusive personal communication medium, also facilitated citizen engagement in public affairs as it enabled everyone to participate in the threads of conversations on the wall of the Mayor.

The very nature of Facebook can also be its limitation. Citizens flock to an online community only if the social presence of the person on the other end of the communication line is strong. In the case of Cainta, citizens chose the online community of the Mayor and not the online community of its disaster risk reduction and management office because the former keeps a strong social presence.

Good communication and social skills are also required from risk managers to keep citizens hooked up to the online community and remain engaged in conversations. On the part of the citizens of Cainta, Facebook's role as a crowdsourcing tool became effective because they volunteered to give reports to the Mayor. However, many also failed to submit reports with complete information which would have made them more useful.

Since Facebook is both a personal space and a communication medium, tapping it for emergency or as communication lifeline can be challenging especially for a politician. Despite the Mayor's instruction for

citizens to post only their emergencies in the thread he opened, there was a strong tendency for citizens to ignore this. They continued to post non-risk information, clogging the threads with more messages of commendation and gratitude to the mayor.

IMPLICATIONS AND RECOMMENDATION

Facebook, a multi-way online communication environment where hyper local and high value information such as risk information can be freely disseminated and shared, could play a key role when tapped as communication lifeline for citizens.

The findings of this study could benefit government institutions planning to tap Facebook for their risk management programs. It can provide LGUs eyeing to use Facebook for risk management some research-based knowledge on the nature of social media, their affordances and limitations, and on lessons drawn from its actual implementation for risk management in a local government setting.

This study, a case study, is limited only to the use of Facebook in a single application or setting and did not include other social media such as Instagram and Twitter. To expand the scope of study, other studies could also focus on other local government units in the Philippines that are now using social media for their risk management programs.

NOTE

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