Communicative events in disaster situations: the changing role of social media

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Abstract: Facebook and other social media show indicators of behaving as a rudimentary form of collective consciousness as more and more people engage in social networking activities facilitated by the user friendliness of the social media resulting in interactivity and interconnectivity.

This study evaluates the users' activities on the networking site Facebook in the light of super typhoon Haiyan. As such the study focused only Facebook messages that reflect or pertain to ecological topics. Such insights into the "collective actions" and other social initiatives are valuable information to situate the emerging attributions of typhoon impact, government behaviour and their ecological implications and consequences to social dynamics.

A vigorous and self-sustaining information flow and exchange is critical in keeping the principle of "transparency" alive and more so in direst of moments. Results of the study show that *liking, sharing, commenting* and *posting* updates are ways available to the user to curate or make sense of the volume of information available in the internet. Furthermore, what drives people to interact is a complex of factors which manifests in their message threads. Reflexive empowerment could rapidly occur provided the right factors and condition such as in cases of calamities and disasters are present to prompt people to action. Such catalytic communicative event may result in a contagion resulting to clustering or bandwagon effect. If the intensity of such contagion is high enough, such social network can transform into an actual and real-time social engagement.

Key Words: interconnectivity; interactivity; new media; typhoon Haiyan; collective intelligence; facebook; social media

1. INTRODUCTION

New media architecture

The architecture of the new media contain technologies that enable digital interactivity due to its speed in processing and conveying information. This new media is mostly digital and enables "on demand access to content anytime, anywhere, on any digital devise, as well interactive user feedback, and creative participation (Schivinski and Dabrowski, 2014)." A subset of the new media is the social media which refers to "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow

the creation and exchange of user-generated content (Kaplan and Haenlein, 2012)." Web 2.0 refers to a second wave of Internet functionalities that facilitated communication, collaboration, and community (Bressers ans Hume, 2012).

An example of social media is the social networking site, Facebook. It figured highly when Haiyan, "the strongest tropical cyclone on record to make landfall in world history," (Santos 2013) devastated the Eastern Visayas region of the Philippines on November 8, 2013 as it became a medium where people shared emotional connection, information, and expressions of solace.

Because a central feature of Facebook is it's being user-driven this paper studied how a social chronicler, a volunteer group, and two government units initiated communication events pertaining to Haiyan using the social networking site Facebook. This study sought to find out whether the capability of the social media to facilitate collaboration and participation was optimized. The study limited its analysis to Facebook posts which contained or pertained to ecological subject matters. Because the nature of the perturbation was ecological the researchers wanted to find out how much of the posts related to environmental topics.

2. METHODOLOGY

Three types of Facebook accounts were chosen, that of a social chronicler, a volunteer photojournalist, and the government. Communication flow patterns were evaluated according to the patterns generated by the user's Facebook activities.

Two interviews, were held, one with the social chronicler and the other with one of the organizer of the social action group which emerged out of the photojournalists use of Facebook.

Because the structure of the Facebook technology is centered on its being user-driven, this paper observed whether there is a collective unconscious manifested. Collective unconscious as used in this paper refers to the influence of a prior commonality which influences the network of users to act as a single unit.

The authors view Facebook as a social space, a sort of a digital universe parallel to the real world social environment of the user. The user serves as the interaction point using digital media as a tool in sustaining the interactions.

3. RESULTS AND DISCUSSION

The three FB accounts illustrate the use of Facebook structure in the personal user-driven motivations of these three netizens.

3.1 The Social Chronicler

The Chronicler is a freelance writer and artist who has been using Facebook since 2009. According to him, he has been exploring the Web to gather ideas for his creative projects, all of which are currently in progress.

3.2 Track pattern

Four Facebook options could be used to link up – *status update, like, share* and *comment*. Posting video, pictures as well as attaching files are also some ways communication could be facilitated in Facebook.

These tools are the disposal of the user to assist him or her in creating a social space in Facebook or within a network of friends. At a glance, these tools give the browser a feedback summary on a particular *post*. It also informs him of who among the friends of a friends responded by *liking, commenting* and *sharing*.

The *Like, Share* and *Comment* buttons signify the degree of interest of the user on the particular item (a photo, a comment, a status update). Thus, it could be a way of filtering or sorting through the barrage or streams of information. How the user orders his universe is manifest therefore in his Facebook history.

The hyperlinks with such simple and easy to use functions enable a user to create or expand networks for a particular purpose. That is, if the user would gain enough mastery of FB and related applications.

3.3 A personal space

The FB account of an individual remains a personal space curated by the user for his own satisfaction and purpose.

Selected posts or message threads on the Chronicler's wall which were related to ecological topics were chosen. Commentaries on updates that caught his interest ranged from ecological challenges such as the danger due to the impact of global change on weather patterns, resiliency of the Filipinos with

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respect to handling calamities, issues and concerns on the rescue and relief efforts, rehabilitation efforts, corruption in government, and community development among other concerns. During the interview with him, he explained that his interest in monitoring these message threads aside from knowing what is happening is due to the fact that he was preparing for an exhibit and travel arrangements and such information are valuable to his work.

Observation of correspondences on the Chronicler's Facebook wall indicated that his use of the Facebook structures namely *post, comment, like, groups, and share* reflect a general interest on ecological issues. Several message threads showed an exchange of substantial or serious concerns on current state of affairs due to Haiyan, the extent or reach of which circulated only in his circle of friends. He may have some valid concerns but it did not reflect a state of active and focused advocacy. FB remains a personal space curated by the user for his own satisfaction and purpose.

The Facebook structure allowed him dyad associations which suggested a simple correspondence with anyone of his friends on a particular item.

3.4 Context and drivers

Among the clarifications during the interview with the Chronicler was the context of one of his posts about resiliency. He narrated that he got concerned with one of the message threads on one of the status updates of one of his friends who jestingly dismissed the impact of Haiyan in the light of early reports of a low casualty level even when Haiyan's strength was considered off the scale. Chronicler's friend posted: "We snack on typhoons in the Philippines" and this became general theme of the said message thread.

He explained that he was not comfortable with the idea of resiliency because resiliency according to him is a general attribute of all living things and to praise such a trait connotes that all other means of handling the disaster had failed.

He added that *commenting, sharing* and *liking* were ways for him to mark events or interesting information, which may come handy later on. He also mentioned he tried to be conscientious and so he browsed other sources to confirm claims which to him appeared suspicious. He cited an instance when he encountered a purported warning

from CNN about a 4-degree Celsius rise in average global temperature within a year. He did check it out and it came to the conclusion that the claim was erroneous and was tantamount to using fear tactic to get an idea across people. He added that the "new normal" is frightening enough and there is no more need for distorting facts to create fear.

What drives people to interact in a social network appear to be a complex of factors extending from a simple gesture of getting in touch to a myriad of professional reasons such as in the case of the Chronicler -- advocacy and self-expression.

3.5 Information sourcing, use and interactions

The Chronicler's network of friends as revealed on the *status updates* which he *liked* revealed a network of friends from different fields of discipline and each with different concerns.

For example, VE is one of the FB friends of the Chronicler who works as a researcher in an academic institution. He appeared to be using his FB account as journal and as a way to share developments on his work with his institution. He regularly posted information pertaining to their activities with different organizations with respect to the evaluation of damage and possible recovery strategy for the agricultural sector in the Visayas.

Another friend of the Chronicler posted in Facebook his personal experiences as he went to the Visayas and volunteered as a community worker. The Chronicler's posts did not show any interest in engaging or exploring the thread of community volunteerism or helping out since his participation in the chosen message threads involved simple *likes* and re-*sharing of posts*. These two examples illustrate the role of the social network as a repository of information. The Chronicler, through his network of friends, therefore had virtual supplier of information in the form of newsfeeds, updates and reposts.

3.6 Growth of a Network

Subject B is a noted photojournalist and like many people uses Facebook in a number of ways suited to their interest and concerns.

What made the photojournalist's message threads significant to the study was it manifested the formation of what could be considered a social movement or what Ahlqvist, Back, Halonen et al, in 2008 referred to as reflexive empowerment, the third type of development associated with the use of Web 2.0 social media applications in which the social media such FB acts as an enabler of grassroots involvement and participation.

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The photojournalist's message threads showed references to events, people, organizations and a common cause from its inception to call of action, identity setting, expansion (vertical and horizontal integration), rudimentary system of organization and coordination as well as challenges, difficulties and conflict as the movement interacted with other players involved in the general relief and evacuation efforts.

The message thread through time showed the progression in ideas, communication network, links with other groups and activities of broad-based group of people bounded in a common project of feeding the hungry and whose activities, according to one of the lead persons were generally coordinated in Facebook.

3.6.1 Inception

On Nov. 5, 2013 three days before Haiyan hit Central Philippines, the photojournalist posted: "Rain or Shine we open tomorrow," referring to a workshop his group was organizing. According to the photojournalist's wife, they bought a set of cooking utensils since the photojournalist volunteered to cook for the workshop group. He had also expressed his passion for cooking in his prior updates.

Subsequent posts up to Nov 13, showed images of the workshop and typhoon related images from different parts of the country some of which the Photojournalist *shared* . In other posts, the Photojournalist was *tagged* thereby making the posts (images, text, video clips) appear in his timeline allowing the Facebook structure to be directly shared in his *timeline*.

On a status update dated Nov. 13, 2013, the Photojournalist quipped that: "I would do anything to cook lugaw for the victims of Yolanda right now."

The response was immediate and elicited 15 comments all of which were encouraging and supportive of the Photojournalist's suggestion. Several people volunteered to assist in the project of cooking for Yolanda victims. One volunteered to cook turbo chicken. Another shared the information about free flights to Tacloban. Some suggested mobilizing others colloquially referred to as "tropa." Another suggested a place in Leyte to hold the feeding project.

3.6.2 The call to action

Two days later, by Nov. 15, the Photojournalist declared that he was leaving for Villamor Airbase to set up a mobile kitchen.

By this time, the call to "cook for Yolanda victims" had picked up adherents complete with a fund raiser, call for donations of food and drinks and a call for volunteers. In another update, more details on arrangements with the airbase for ingress and egress were outlined. A call for vehicles to ferry survivors to their relatives was made. Banking details for donations were also given.

The choice of Villamor Airbase could be gleaned on a comment on subject's post relaying a plea for support for a handful of volunteer assisting evacuees who were airlifted from Tacloban.

3.6.3 Contagion or going "viral" and cluster effect

For a call to action to prosper, others should be "infected" with enough enthusiasm for them to act in behalf of the cause, the initiator or both as what likely happened in the mobile kitchen project of the photojournalist.

By Nov. 16, the feed the hungry project was picked up by the national media and information traffic increased as photos of efforts were posted and shared in Facebook. A positive spiral appeared to be a good description of the sudden increase of information volume about the project and the positive feedback it generated.

At the same period, news and feature articles, personal post with a theme of volunteerism were being circulated through sharing and tagging. According to an informant close to the project, "kindness was the order of the day" and that donations and help freely flowed. Trust system was also high as people gave money donations to the mobile kitchen without asking for receipt or auditing later. All appeared to have assumed the best of everybody and that it would be unthinkable for any of the volunteers to take advantage of the situation for their own benefits or gains.

People worked gladly, essentially without baggage and firm in the belief of the importance of what they were doing.

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Figure 1. A shared photo where the photojournalist was tagged. Photograph shows images of airlifted evacuees, at the Villamor Air Base, Nov. 16 2013.

3.6.4 Networks and emerging movements

The simple functions of sharing and tagging kept the interest on the project alive in the Internet. In a world of continues flow of information, *sharing* and *tagging* connects related activities. The mobile kitchen, by the end of November, had spawned collateral activities such as a free concert. Apparently these activities were picked up by the press and had generated wider support which may have been contributory in the flow of donations as suggested in a post acknowledging donors and volunteers.

Figure 2. Images of market vendors

3.6.5 Catalytic effect

The thread on the project by the end of second week of its operation had stimulated real or actual social engagements on many of the people in the Haiyan loop or within the photojournalist's circle of friends. The message thread encouraged them to reach out to others and got them involved in the general effort of lending assistance to communities and people affected by the calamitous event.

The combination of written and visual texts highlighted the power of the social media not only to convey information but also in adding evidentiary weight to the veracity of the updates. It pushes the reader or anyone reading the thread to focus on the reality represented in the posts.

The role of the lead person or initiator is most important in this setting as the initiator's posts and updates serve as the guidepost for action and

general demeanor of all participants in an unfolding social drama.

That the spontaneous movement transformed in a form of a collective consciousness as articulated by the initiator enveloped the participants in an atmosphere through which they could identify.

3.6.6 Testimony

Of all the types of messages, a testimony appears to be the most emotionally packed as it is a first person account -- a product of a reflective moment on a particular item or object of reflection. Touching lives, commitment and upholding virtues such as kindness, care and cooperation appeared to be the underlying theme which aside from the stated objectives of the project also added to the adhesiveness of the social movement thus sustaining their efforts.

Many of the volunteers wrote something about their involvement in the feeding project. While the cooking activities were feeding a stream of people airlifted to VAB, updates and testimonies were feeding the interest of the growing network of support to what the photojournalist had started.

Combined with updates on what were accomplished, reinforced the "reality" of the project. By the 25th of November, the team was feeding 1000 people daily. The figure gave an idea on the magnitude of devastation as indicated by number of evacuated and assisted in Villamor.

3.6.7 Integration of clusters

Another item evident in the socialization of the project was the transformation of passive and casual relationships into an active mutual support system such as parallel activities on raising funds with portions of the funds raised donated to the efforts of the mobile kitchen.

In this sense, the thread could be considered as transformational, that is the links or the network of friends, friends of friends was transformed into a system of flexible coordination and complementation towards fulfillment of a common goal -- feeding the evacuees and volunteers in Villamor Airbase.

3.7 The Government Organization (GO) Facebook accounts

Two GO Facebook accounts were evaluated. One is the National Disaster Risk Reduction and Management Council (NDRRCC) which is mandated

as the over-all organization on top of disaster situations and preparations to mitigate impact of possible destructive natural and anthropogenic occurrences. The second is the Department of Social Welfare and Development (DSWD), which is the general service arm of the government.

3.7.1 The NDRRMC Facebook Page

Nothing on the NDRRMC's FB page suggested anything about its namesake – Disaster and Risk Reduction. It may be self-defeating for the agency to use a social networking site such as Facebook because rather than 'invite', their page seems to alienate visitors and discourage online interaction.

Prior to November 8, the fateful day of Yolanda's landfall, only one post from the administrator can be noted. From the same snapshot of the page which spanned the significant dates (prior and after Yolanda), it was noticeable that the agency was less concerned with the typhoon which destroyed the Eastern Visayas seaboard than the volcanic activities of Taal and Mayon in Luzon.

The page did little to educate its viewers for the long-term; posts were merely prompts to direct to certain links which contained the actual advisory released by the government agency.

The agency did not seem to take advantage of the 'real-time' feature of social networking sites since information as urgent as the content of the attached advisories should have been directly posted on the Facebook wall of the agency either as a status or an uploaded photo.
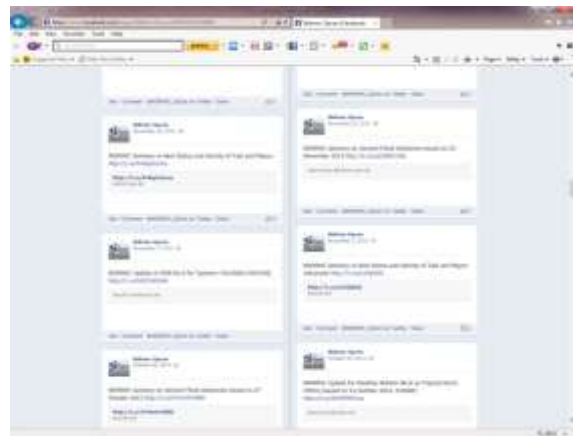
Figure 3. Sample screen shot of NDRRMC Facebook page.

Even if Internet speed was not a problem, the extra step in accessing the information (through clicking the link) suggested impediment to access and therefore impressed discouragement for the visitor; if not an unwillingness of the administrator to share the vital info. A 'get-it-if-you- want-it' subtext hang in the air.

To add to this perceived snobbery, the document from the Severe Weather Bulletin was in pure English only; no translation to Filipino nor to the more important vernacular of Eastern Visayas could be found. The advisories attached were a bit technical for laymen to consume.

It is interesting to note the irony in a government agency's use of social media only to alienate the public it needs to connect with.

Despite such weaknesses of the page, interestingly, a handful of 'like' clicks were noted, at most less than five per post. No comments were found; perhaps the visitors found no interesting status to comment on.

3.7.2 DSWD Facebook page

The DSWD FB page offers a completely different vista in terms of generating social interaction. The page itself is well-laden with photos – making good use of Facebook's primary function as a tool for sharing pictures and generating comments. Indeed the photos fill the page and seem to lend a feel of buzzing activity. A welcome contrast to the stiff, stoic, and dark grey 'motif' generated by the NDRRMC page.

From the perspective of the involved, it will be easy to feel good about this page: continuous and contiguous comment threads on donations coming in, outreach and relief projects being implemented, international celebrities assisting in the relief distribution, and pictures of smiling recipients of the assistance posted were all orchestrated to achieve the 'feel-good effect.'

From an objective view, with its popular newsletter format, it cannot be helped to read 'photo ops' all over the page. Indeed, the Social Network is a very powerful platform to spread ideas and impressions.

With many comments accumulated, the commenters contributed to the creation of meaning that the page administrator wished to convey. The

'We're doing our job' or even 'We're doing a great job' subtext cannot be missed out.

Figure 4. Screen shot of DSWD Facebook page.

3.7.3 Web 1.0 in a Web 2.0 platform

The NDRRMC and the DSWD FB pages showed a single line, one direction type of communication flow pattern that precludes real time and synchronous interactions with the public thus missing an opportunity for meaningful engagement between the public and the government in a time when people needed reassurance from the authorities. We must stress though that such an assessment is true only in the case of GOs using a popular social media such as FB. It is not an objective of the study to unravel the general online-based communication practice of these GOs.

It suffices to say that the single-line, one-direction type of communication pattern exhibited by these GOs may be the reason for the sense of alienation of these agencies with respect to the public. As far as Facebook is concerned, government is sorely absent. It is as if government is still thinking in the Web 1.0 mode in contrast to the public who are using Facebook and who have been taking advantage of the Web 2.0 interactive features in current popular web-based social networks.

4. CONCLUSIONS

4.1 Empowered user

The easy to use features of FB and its platform which allow high interactivity enable the user to create or expand his network for his particular purpose thus increasing the range of interactivity and its possibilities.

Different users reflect different communication flow patterns depending on the nature of their activities and their intentions.

What drives people to interact is a complex of factors which manifests in their message threads.

4.2 Explosive power of social media

A personal network of friends, groups and community could be an explosive mix depending on their information content -- message threads, posts, images, and videos shared, and willingness of people in such a network to act on such an information.

Messages may have a deep and powerful underlying context which could motivate a user to crossover to active real time and intense social interaction.

Reflexive empowerment could rapidly occur provided the right factors and condition such as in cases of calamities and disasters are present to prompt people to action. Such catalytic communicative event may trigger the process of contagion resulting in a clustering or bandwagon effect. If the intensity of such contagion is high enough, such social network can transform into an actual and real-time social engagement. In the case of the mobile kitchen project, the intensity was such.

Messages such as activity updates and testimonies are essential in keeping the channels open and in encouraging continuous exchange of information. Sustained communication is critical in maintaining high morale and enthusiasm for the cause, gluing the movement together.

4.3 Growth pattern of a digital social space

Development of the digital social space was evident as manifested in the message thread through time and in progression of information flow pattern from simple to a complex configuration e.g. from linear to a dyad to a multi-channel interactivity.

A network could horizontally (linking up with other groups with same casue) and vertically (the network increased in membership or participants) expand.

4.4 Unrealized potential of social network

While the social chronicler and the photojournalist were using the internet according to their set purpose and both of whom displayed high internet activities, the GO Facebook pages were underused and functioned as a mere digital bill board featuring the highlights and used for "for your

information" type of communication. It was non-interactive and hence discouraged participation to a point, possibly alienating the public.

The potential of government given its resources and personnel as a catalyst and mobilizer was therefore unrealized as far as the use of social media such as Facebook was concerned.

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