Role of Social Media in Disaster Response

A Case Study of Social Media use by Nepal Police for crisis response during and after the 2015 Nepal earthquake

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The purpose of this study is to explore how social media is used in crisis response by emergency response organization.

Understand how online convergence behaviors and crisis communication practices of an emergency response organization interact.
The EQ Day

- Com Dir staffs converged at the designated space.
- Established ComCenter asap.
Carpe Diem!

- The crisis situation was demanding Nepal Police to go beyond its routine works.
- “Risk goes up as time runs down” - Lt. Gen. Dan “Fig” Leaf, Director of APCSS.
- The challenge was to provide “the right information to the right people at the right time”*.
- How Significant is Social Media for Police works?

* ISOC’s INET KTM Brochure
Carpe Diem!

How strong is social media these days, just an example nepalpolice twitter is reference for CNN.

This presentation will shade lights on how government organizations in spite of resource crunches can carpe diem to work effectively when faced with a large scale disaster.
Social Media and Crowd Sourcing

- Consolidation work was quickly mobilized with existing facebook page along with newly stared SMS and twitter services (@NepalPoliceHQ) to minimize the risk as time passes.

- **Facebook:** First post after the first quake: @4:59 pm “request for information on quake damages.”
  - Facebook response rate: 50% responses per hour (questions/issues/suggestions)
  - Likes: >1.1 million

- **SMS service** was started on 26th April.
  - We received more than 7000 SMSs.

- **Twitter:** Started on 27th April. Followers: 130K
  - Response rate: reply rate 76/day

Compiled on 06/05/2015
Some Info and Data

- **Person Location Finding Requests:**
  - Through
    - Face book – 50%
    - Twitter – 29%
    - SMS – 21%

- **Twitter:**
  - We got 11 retweets for 1 tweet.
  - Per day 585 retweets.
  - We had 68% users in Nepal.
  - **Gender:** 87% Male and 13% Female.
  - **Device:** 56% uses Android and 15% IOS.

- **Twitter Direct Messages (DM):**
  - On average 10 twitter users per day interacted with us.

Compiled on 06/05/2015
Major public concerns

- Rescue and relief
- Rumors/sites/accounts
- Road/Traffic/Transportation
- EQ Data and Information
- Anti-social activities in neighborhood
- Black marketing
- House rent, Building construction
- Personal
Role of Social Media

- After receiving information from social media users that women and infants were not getting their daily needs (baby food, diapers etc) Nepal Police mobilized its W&C Directorate for collection and distribution of relief materials.
Role of Social Media

Upon receiving complaints of lack of power for charging handheld devices Mobile Solar Charging stations were established.
Role of Social Media

✓ A Facebook SOS message: People stranded due to landslides at Dolakha were rescued immediately after receiving information via FB messenger.

✓ Social media became an effective tool to foreigners whose family and friends were visiting Nepal.

✓ They sent information, photos etc which were sent to missing person unit.

✓ Data and Infographics:
  ✓ Provided important data and information to different media, research centers and academics in Nepal and abroad.
  ✓ Created and disseminated Infographics.
Infographics

Casualties in Nepal Earthquake 2015

Number of Casualties

- Identified 96%: 8193
- Unidentified 4%: 299

Out of 96% of Identified Death bodies

Casualties (Region wise)

Update: 16th May, 2015, 17:00 Hrs
Infographics

Before Earthquake

- **Nuwakot**: 66 Gov Offices, 484 Edu Institutions, 72 Health Centers, 26 Police Units
- **Dhading**: 33 Gov Offices, 581 Edu Institutions, 53 Health Centers, 28 Police Units
- **Rasuwa**: 74 Gov Offices, 95 Edu Institutions, 38 Health Centers, 14 Police Units
- **Sindhupalchowk**: 210 Gov Offices, 28 Police Units, 80 Health Centers, 605 Edu Institutions
- **Gorkha**: 35 Gov Offices, 506 Edu Institutions, 85 Health Centers, 41 Police Units
- **Kavre**: 166 Gov Offices, 592 Edu Institutions, 105 Health Centers, 34 Police Units
- **Dolkha**: 40 Gov Offices, 370 Edu Institutions, 59 Health Centers, 22 Police Units
- **Dolka**: 6C, 3P Gov Offices, 325C, 135P Edu Institutions, 41C, 42P Health Centers, 29C, 22P Police Units
- **Sindhupalchowk**: 62C, 35P Gov Offices, 158C, 19P Edu Institutions, 17C, 5P Health Centers, 24C, 4P Police Units
- **Gorkha**: 14C, 17P Gov Offices, 325C, 133P Edu Institutions, 32C, 14P Health Centers, 9C, 13P Police Units
- **Sindhuli**: 147 Gov Offices, 444 Edu Institutions, 55 Health Centers, 28 Police Units
- **Ramechhap**: 104 Gov Offices, 457 Edu Institutions, 59 Health Centers, 25 Police Units
- **Sindhuli**: 4C, 60P Gov Offices, 68C, 192P Edu Institutions, 7C, 40P Health Centers, 5C, 18P Police Units
- **Ramechhap**: 20C, 41P Gov Offices, 23C, 129P Edu Institutions, 2C, 23P Health Centers, 7C, 15P Police Units

After Earthquake

Excluding Kathmandu Valley

C = Complete
P = Partial
Edu = Educational Gov = Government
Challenges

- Now the challenge was to understand how actually social media was used in crisis response by emergency response organization.
- And how online convergence behaviors and crisis communication practices of an emergency response organization interacted.
Research Approach

- Broadcast Information
- Broadcast Warning
- Encourage Behavior
- Appeal for Information
- Fighting Rumors
  (Ehnis and Bunker, 2012 & 2013)

- Police Crisis Communication Practices

- Interactions

- Convergence Behaviors

- Institutional Elements
  (Scott (2008))
  - Expectations, Profile, Protocols, Mission, Norms, Roles, Jobs etc

- Returnees
- Anxious
- Helpers
- Curious
- Exploiters
- Supporters
- Mourners
- Detectives
  (Fritz and Mathewson, 1957; Kendra and Witchendorf 2005; and Subba and Bui 2010).

The Conceptual Framework
Methodology

- Research Site
- Data Collection
  - Netnography
  - Twitter Analytics
- Analysis
  - Content Analysis
  - Codes, Categories, Themes
  - Twitter Analytics
Findings: Convergence Behaviors

The Returnees:


The Anxious:

1. @NepalPoliceHQ
   - नेपाल पुलिस HQ को ट्विटर सक्रिय रूप से राख भए। स्थिति अनेक है।
   - नेपाल पुलिस HQ के ट्विटर स्थिति अनेक है।

2. @NepalPoliceHQ
   - नेपाल पुलिस HQ के ट्विटर स्थिति अनेक है।
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suren raj @karxivhais · May 24
@NepalPoliceHQ sir I am worried about my birth place beni bazaar, it's a fragile area, ppi must be evacuated asap, NP sd take control of beni.

muni raj @muniqraj · May 24
@NepalPoliceHQ बेनी का बाजार लाई नाम नभाम तकरा लटका कटीद शोध है जस्ते लस्ती, फोड़े, मिलनपुक्का मालदुशागालाई पति सजा गराबानु जहाँ छ।
Findings: Convergence Behaviors

The Helpers

U.S. Embassy Nepal  @USEmbassyNepal · Jun 3
@silverlightgal @AyonNepal @RRTnepal @NepalPoliceHQ Try contacting
ps.joshi@uninhabitat.org.np or sanjeev.hada@ifrc.org

The Curious:

WA SMA Tester  @wasmatester · May 30
"@NepalPoliceHQ: Do you have any reports on the compensation package
announced by Nepal government for victims?" #wasmatester @wasmatester

@jorajani03 · May 24
@nepalpolicehq कति किलोमिटर जति ताल बनेको छ होला वस्ती दुबाको छ कि छैन | नविबाट
कति किलोमिटर सम्म खताराछ
Findings: Convergence Behaviors

The Supporters:

The Mourners

Findings: Convergence Behaviors

The Exploiters

Shovit Sharma @ShovitAtom · 12m
Dear @NepalPoliceHQ, One vehicle is selling tarpaulin here in Kamaladi. People told that these are free. Please suggest pic.twitter.com/PBNlctdmUR

Shovit Sharma @ShovitAtom · 6m
@NepalPoliceHQ Thank you. Police came and take the vehicle to Durbarmarg police office.

12:24 PM · 13 May 2015 · Details

The Detectives

Nepal Police @NepalPoliceHQ · 17m
Rupees 4 hundred 60 thousand has been returned to the passengers from the transport operators according to Sindhuli District Police office.

9:31 AM · 20 Apr 2013

## Findings: Crisis Communication Practices

### Queensland Police, Australia

<table>
<thead>
<tr>
<th>Genre</th>
<th>Sub-Genre</th>
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<tbody>
<tr>
<td>Broadcast Information</td>
<td>Road Information</td>
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<td>Flood Information</td>
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<td>Weather Information</td>
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<td>Information about Supply</td>
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<td>Information about Energy Supply</td>
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<td>General Information</td>
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<tr>
<td>Broadcast Warning</td>
<td>Flood Warning</td>
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<td>General Warning</td>
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<td>Encourage Behavior</td>
<td>Navigate Behavior</td>
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<td>Appeal for Volunteers</td>
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<td>Appeal for Donations</td>
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<td>Evacuations</td>
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<td>Appeal for Information</td>
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<td>Fighting Rumor</td>
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### Nepal Police

<table>
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<td>Landslide Information</td>
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<td>Information about Relief Supply</td>
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<td>Information about Rescue</td>
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<td>Information about Casualties</td>
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<td>Contact Information</td>
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<td>Information on Missing People</td>
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<td>Information about Controlling Exploitation</td>
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<td>Information on disaster community work</td>
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<td>General Information</td>
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<td>Infographics/Data</td>
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<tr>
<td>Broadcast Warning</td>
<td>Flood/Landslide Warning</td>
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<td>Exploitation Warning</td>
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Crisis Communication Practices of Nepal Police in April and May 2015

Frequency in April

Frequency in May
### Mapping Convergence Behaviors and Crisis Communication Practices

<table>
<thead>
<tr>
<th>Engagement Rate_April15</th>
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<tr>
<td>Info on Missing Persons</td>
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A, C, D, H, M, S - represents convergence behaviors.
"Detective behavior" provided information about "Exploitation behavior" to @nepalpolicehq in an EXPECTATION that Police will take action. @nepalpolicehq informed local police due to OBDIENCE TO DUTY. PHQ is at higher PROTOCOL than local police which took action based on RULES and LAWS. Its COLLABORATION between public and emergency responder.
Additional Findings…

Honoring Right To Information

bhanubhakta @bhanubhakta567 · 1m
नेपाल प्रहरीको टिविटर @NepalPoliceHQ मा सहायता मागे। reply को आश्चियन, तर reply आयो। सुचारुको हकको समान गरेको माग्यो लायो। Thank U.

Online Governance

कुमारको @Davidkul का खाता भुक्कापियो सिर्जन सविकोएछि पनि सबैभन्दा बाँटल हुनु पर्दछ। कटा कटा सरकार छ कि भने अनुमति गर्ने पाइयो छ। धन्यवाद नेपु.

Official Information

Mani Dahal @maninagerik · 4m
सरकारी निकायका टिविटरका संक्रिया हुन्छ धन्यवाद। कुटौटको समयमा अधिकारको सूचना पाइने छ | @NepalPoliceHQ को सहभागी अपठित र रूपान्तरित छ।

Rapid Response

कसाईको साफ @sasi188 · 1m
@NepalPoliceHQ अधिकारको सूचना प्रवाहित र अपठितर परिस्थितियाँ तुर्ने सहयोगमा साजिदहोलो भने महसुस भएको छ। धन्यवाद। चन्द्रस्वान परीवार नेपाल प्रहरीलाई

Bridging the Gap

Sujan Paudel @sujankp · 2h
I am pleasantly surprised by @NepalPoliceHQ timely and relevant twitter updates. This will bridge the gap between the police and the people

Information Dissemination

Lekhnath Pathak @LekhnathPathak · 24m
यस पाकरको महत्वपूर्ण नेपाल प्रहरीको सबैभन्दा प्रसारित कार्य-सामाजिक संज्ञाल गर्ने सूचना प्रवाहित गर्नुहार का। धन्यवाद। @NepalPoliceHQ #NepalQuake

Controlling Crime

Keshab Raj Bhusal @bkeshabraj · 26m
@NepalPoliceHQ सामाजिक संज्ञाल को सबै पर्यायं भयोभन्ने अपराधिक क्रृत्यालाप को सुचारुलाई सजिलो हुनेछ।
Future

- Intra Agency Coordination and Inter Agency Coordination by using Social Media.
  - @nepalpolicehq and @NEoCOOfficial

- Government utilization of web based Crisis Information Management Systems
Social media can be used for crisis response.

There has to be a relationship between publics behavior online and crisis communication practices of emergency response organizations.

It should be used as a public service tool not as a organizational “mouth piece” only.
This is the team that provides real-time information via @nepalpolicehq.

@kptantra
11h

यही हो त्यो समुह जसले @nepalpolicehq मार्फत पलपलका सूचना बिझर्नेका छन्

This is the team that provides real-time information via @nepalpolicehq.