THE PARADOX OF SOCIAL MEDIA-BASED PUBLICITY APPEALS FOR MISSING PERSONS: WHO ARE WE APPEALING TO?

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AIMS

• Background/ Literature
• Initial Model
• Methodology
• New model
• Discussion
2019 - This Is What Happens In An Internet Minute

60 SECONDS

- 3.8 Million Google Searches
- 1 Million Facebook Logging In
- 18.1 Million Facebook Texts Sent
- 4.5 Million YouTube Videos Viewed
- 694,444 Netflix Hours Watched
- 390,030 Apps Downloaded
- 347,222 Scrolling Instagram
- 87,500 People Tweeting
- 2.1 Million Snapchat Snaps Created
- 41.6 Million Messages Sent
- 4.8 Million Gifs Served
- 180 Amazon Echo Smart Speakers Shipped
- 1 Million Twitch Views
- 1 Million Emails Sent

Created By:
@LoriLewis
@OfficiallyChadd
FACTORS OF EFFECTIVENESS OF PUBLICITY APPEALS ON SOCIAL MEDIA

- Sightings
- Appeal to the missing person themselves/ gain contact
- Support for family and loved ones
- Exposure and promoting engagement
- Timing of the posts
- Safeguarding through publicity appeals (Trolling)
CHALLENGES OF RELEASING APPEALS

Ensuring all cases have a risk assessment

• Drivsholm, Moralis, Greene and Woolnough (2017) found that 70.6% of appeals received a risk assessment

Ensuring the best interest of the missing person and their families

• Children cannot consent or participate in the appeal

Removing content immediately and consistently across all channels

• The right to be forgotten
• Ensuring consistent practice
• The right to go missing
SOCIAL MEDIA AND MISSING PERSONS

• Policing and social media
  • Social media strategies are not consistent across forces (Meijer & Thaens, 2013)
  • Missing person cases are very different and may not allow for generalizability in terms of social media practices (Fyfe, Stevenson & Woolnough, 2016)

• Tsoi et al. (2018) explored the use of Twitter for those who went lost due to dementia
  • No significant association between tweets and retweets and outcomes of finding
  • Those with larger followings are encouraged to share appeals

• Online and offline behaviour
  • Accuracy at predicting voting patterns (Tumasjan et al., 2010)
  • Asur and Huberman (2010) correlated frequency of posts and sentiment related to movies and found this method of prediction to be more accurate than the Hollywood stock market.
INITIAL MODEL OF EFFECTIVENESS

**Target:** Appeal to the public in hopes of gaining a sighting

- Increasing engagement/social media activity
- Releasing the appeal in a timely manner
- Appealing to the missing person causing them to contact the charity/family/police
- Safeguarding the missing person through neutral appeals

**Factors affecting effectiveness**

**Outcome:** Sighting resulting from publicity appeal on SNS
<table>
<thead>
<tr>
<th>WEB SCRAPING</th>
<th>Manual</th>
<th>Automatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data points (total)</td>
<td>FB (348) Twitter (184)</td>
<td>FB (10,774) Twitter (6,477)</td>
</tr>
<tr>
<td>Method</td>
<td>Twice a week around 1-4pm where current Missing People Charity FB albums and Twitter feeds were scraped</td>
<td>Data was scraped once a week for 8 weeks where the Missing People Charity UK was scraped</td>
</tr>
<tr>
<td>Sampling approach</td>
<td>Random sampling approach of ONLY publicity appeals and no other content on the platforms</td>
<td>Complete scrape of both platforms which include publicity appeals and other social media content posted</td>
</tr>
<tr>
<td>Variables Facebook</td>
<td>Text • Age of disappearance • Date went missing • Location went missing • Likes • Comments • Shares • Ethnicity • Time data collected • Album likes • Album shares • Day of the week posted • Duplicate</td>
<td>Twitter</td>
</tr>
<tr>
<td></td>
<td>Facebook</td>
<td>Twitter</td>
</tr>
<tr>
<td></td>
<td>Author • Time stamps • Reactions (count) • Shares • Comments • Text</td>
<td>Author • Mentions • Hashtags text • Counts • Retweets • Replies • Account summaries • Hashtag counts • Edge list for network visualisation</td>
</tr>
</tbody>
</table>
AUTOMATIC WEB SCRAPING TECHNIQUE

The tweet data, with author, mentions, hashtags, text and counts of retweets, replies and likes broken out in separate columns.

Account occurrence summary, a count of the number of times that each Twitter account appears in the dataset as author or a mention (including retweets).

Counts of the appearances of each hashtag.

A table of edges of the conversational network, i.e. the number of times each pair of accounts communicate with each other.
MANUAL WEB SCRAPING TECHNIQUES

**Facebook Demographics**
- Gender:
  - Male: 71 (43.2%)
  - Female: 88 (55.5%)
- Ethnicity:
  - White: 155 (95.1%)
  - Non-White: 8 (5.1%)

**Facebook Activity Results**

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likes</td>
<td>0-24</td>
<td>1.43</td>
<td>2.81</td>
</tr>
<tr>
<td>Shares</td>
<td>0-290</td>
<td>7.07</td>
<td>24.96</td>
</tr>
<tr>
<td>Comments</td>
<td>0-37</td>
<td>0.52</td>
<td>2.94</td>
</tr>
<tr>
<td>N (Valid)</td>
<td>348</td>
<td>348</td>
<td>348</td>
</tr>
</tbody>
</table>

**Twitter Demographics**
- Gender:
  - Male: 75 (56.1%)
  - Female: 71 (48.9%)
- Ethnicity:
  - White: 155 (95.1%)
  - Non-White: 8 (5.1%)

**Twitter Activity Results**

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likes</td>
<td>0-63</td>
<td>13.27</td>
<td>11.03</td>
</tr>
<tr>
<td>Retweets</td>
<td>0-540</td>
<td>139.70</td>
<td>99.62</td>
</tr>
<tr>
<td>Comments</td>
<td>0-9</td>
<td>0.39</td>
<td>0.90</td>
</tr>
<tr>
<td>N (Valid)</td>
<td>184</td>
<td>184</td>
<td>184</td>
</tr>
</tbody>
</table>
## METHODOLOGICAL IMPLICATIONS

<table>
<thead>
<tr>
<th>Platform</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twitter</td>
<td>Twitter was most suitable to study using automatic web scraping</td>
</tr>
<tr>
<td></td>
<td>Account for all tweets and capture the whole Twitter timeline vs. manual scraping where you are more likely to miss Tweets on news feed due to the variety of content being posted</td>
</tr>
<tr>
<td>Facebook</td>
<td>Facebook was most suitable to study using manual web scraping</td>
</tr>
<tr>
<td></td>
<td>Album function</td>
</tr>
<tr>
<td></td>
<td>Easy to see activity change and monitor that over longer periods of time</td>
</tr>
<tr>
<td>Platform differences became very</td>
<td>Platform differences became very apparent in understanding publicity appeals posted on social media</td>
</tr>
<tr>
<td>apparent</td>
<td>Platform affordances</td>
</tr>
<tr>
<td></td>
<td>Audience</td>
</tr>
</tbody>
</table>
SOCIAL MEDIA PARADOXES IDENTIFIED

• Platform differences
  • Different demographics on different platforms
  • No difference in the practice of releasing publicity appeals based on different platforms

• API Lock out
  • Facebook restricting access to API access
  • Difficult to construct platform comparisons

• Virality
  • The right to be forgotten
  • Data protection
  • Trolling
NEW MODEL OF EFFECTIVENESS

Incident: Publicity appeal is requested for missing persons incident

Stakeholders Goals/Outcomes

- Multi-agency working is a huge factor in releasing publicity appeals
- Often the Charity and the police work together in order to effective release appeals (along with other stakeholders)
- The charity’s goals and outcomes are primarily related to providing support services
- The police goals and outcomes differ in that their main goal is to gain intelligence and recover the missing individual
NEW MODEL OF EFFECTIVENESS

Incident: Publicity appeal is requested for missing persons incident

Stakeholders Goals/Outcomes

Social Media Factors

- Social media metrics
- Network structure & diffusion of information
- Geographical information
- Consistently monitoring platforms

Missing Persons Factors

- Safeguarding
- Right to be forgotten
- Support for family and loved ones
- Promote awareness and support
NEW MODEL OF EFFECTIVENESS

Incident: Publicity appeal is requested for missing persons incident

Stakeholders Goals/Outcomes

Social Media Factors

• Virality
• API lock out
• Platform differences
• Algorithmic bias

Missing Persons Factors

Social media based paradoxes
NEW MODEL OF EFFECTIVENESS

Incident: Publicity appeal is requested for missing persons incident

Stakeholders
Goals/Outcomes

Social Media
Factors

Missing Persons
Factors

Social media based paradoxes

• Multiple outcomes dependent on stakeholders
• Outcomes dependent on social media management
• Context specific outcomes
DISCUSSION

• The model of effectiveness is dependent on the stakeholders involved
  • People found = effectiveness (is that really true)
  • 1 successful case vs. 300 non-successful cases = effective

• Social media metrics
  • How much do they really matter?

• Compassionate fatigue
  • Algorithmic bias
  • Lack of activity

• Virality
  • Methods suitable to identify a viral post
  • An appeal going viral may be effective or ineffective based on the context
  • Frequency of appeals posted – challenging

• Who are we appealing to?
  • Demographics on different platforms
FUTURE RESEARCH

• Public perception survey
  • Online offline relationship
  • Demographics
  • Social media influencing factors
    • Sharing behaviours
    • Identifying top platforms
• Stakeholder interviews
  • Identifying current practice
• Enhancing model of effectiveness
THANK YOU

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