A shift in set: Examining agenda-setting effects on Twitter during the 2012 London Olympics

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Introduction

- Social media have had a dynamic effect on communication (Sutton, 2012)

- Twitter has become the second most used social media site (Barrow, 2012) with over 180 million visits per week (Wasserman, 2012) and 200 million active members (Stadd, 2013)

- Twitter is being used by sport organizations to maximize communication efforts (Fisher, 2009)

- Twitter is a key news source within both collegiate and professional sports (Sanderson, 2011)

- Little attention has been paid to news dissemination on Twitter (Sanderson & Hambrick, 2012) or the salience of that information
Introduction

- @London2012 account was established as the official source for news dissemination during the Olympics on Twitter

- Additionally, #London2012 was created and utilized as a point for centralized communication

- With these conventions in place, over the span of this 16-day event, roughly 150 million tweets were sent (Stadd, 2013)

- Placing this online dialogue within the context of a media effects theory becomes increasingly important to truly understand its implications
The purpose of this study was to examine agenda setting on Twitter during the 2012 London Olympics.

Tweets from the @London2012 account and tweets containing #London2012 were analyzed for agenda-setting effects.

This study was one of the first known attempts to apply agenda setting to Twitter within a sport-specific context.

Does this theory function similarly in traditional and online environments?
Agenda Setting

- The media “may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about” (Cohen, 1963, p. 177)

- Conceptualized by McCombs & Shaw (1972)
  - Relationship between media coverage of issues in 1968 presidential campaign and voter perceptions of these issues
  - High correlation found
  - Similar results found by Shaw & McCombs (1977) and Weaver, Graber, McCombs, & Eyal (1981)

- Frequently employed in communication research to examine:
  - Political communication (e.g., Boyle, 2001; Dunn, 2009; Peake & Eshbaugh-Soha, 2008; Ragas & Kiousis, 2010; Roberts & McCombs, 1994; Shehata, 2010; Wirth et al., 2010)
  - Social issues such as civil rights and crime (e.g., Holbrook & Hill, 2005; Lowry, Nio, & Leitner, 2003; Park, Zhang, & Holody, 2012; Weill, 2001; Winter & Eyal, 1981)
Agenda Setting and Sports

- Expands application of agenda setting from initial investigations (McCombs, 1992)

- Utilized in sport research to examine issue of gender and amounts of coverage
  - Increased coverage could lead to perceived importance to audiences
  - (e.g., Cooper, Eagleman, & Laucella, 2009; Eagleman, Pedersen, & Wharton, 2009; Eastman & Billings, 2000; Kian, Mondello, & Vincent, 2009; King, 2007)

- Specific emphasis has been placed on examination of media agenda during Olympic Games
  - (e.g., Billings & Angelini, 2007; Billings et al., 2008; Billings & Eastman, 2003; Greer et al., 2009; Pratt, Grappendorf, Grundvig, & LeBlanc, 2008; Tuggle & Owen, 1999)
  - Found male athletes received more coverage than female counterparts

- Examination of agenda setting in online environment as related to issue of gender
  - Website (e.g., Sagas, Cunningham, Wigley, & Ashley, 2000; Kian et al., 2009; Redmond et al., 2009) , and blogs (Clavio & Eagleman, 2010)

- Need for further expansion of agenda setting research on social media platforms
Study Rationale & Research Questions

- Hashtags (e.g., #London2012), which act as digital archives for topics on Twitter (Ovadia, 2009) allow for an examination of whether individuals are discussing the same information that is being released by official Twitter accounts (e.g., @London2012)

- Therefore, the following research questions were employed:
  - **RQ1**: Are there similarities or differences between @London2012 and #London2012 in terms of tweet focus (i.e., topic)?
  - **RQ2**: Are there similarities or differences between @London2012 and #London2012 in terms of sport(s) mentioned?
  - **RQ3**: Are there similarities or differences between @London2012 and #London2012 in terms of countries mentioned?
  - **RQ4**: What is the primary affiliation of individuals utilizing #London2012?
  - **RQ5**: Are there similarities or differences between affiliation and the focus (i.e., topic) of #London2012 tweets?
Methodology

- Content analysis

- Collecting online data often presents a methodological issue related to coding (Riffe, Lacy, & Fico, 2008)
  - Nvivo10 utilized to collect tweets as a static data set

- 697 @London2012 tweets & 29,938 #London2012 tweets
  - Systematic random sampling of #London2012 tweets

- 1,696 total tweets analyzed
  - This sample size matched up with previous sport-specific Twitter research (e.g., Frederick et al., in press)
Methodology

- Multiple variables were adopted and modified from previous content analytic research specific to the Olympic Games (e.g., Burch, Eagleman, & Pedersen, 2012)

- Focus:
  - **athlete** (individual athlete), **sport** (rules and requirements, teams; not specific athletes), **other people** (coaches, fans, Olympic officials; no athletes), **sport issue** (steroids, tickets, injuries, etc.; not specific athletes), **IOC** (anything related to the International Olympic Committee), **host city/country** (London, England; opening or closing ceremonies; focus is on the city/country itself), **other city/country** (city/country other than the host city/country focus is on the city/country itself), **media** (mentions of social media use) and **other** (tweets that did not fall into any other category)

- Sport(s) mentioned:
  - A complete list of sports was compiled alphabetically from the London 2012 website
  - This variable contained a combo category and a no sport focus category
Methodology

Countries mentioned:
- The top 10 medal receiving countries were coded 1-10 (1 = United States, 2 = China, etc.)
- If another country was mentioned, it was coded as 11 (i.e., Other) and then the country was listed in the data file

Affiliation:
- athlete (Olympic, professional, or college), coach (Olympic, professional, or college), league personnel (member of the IOC or high ranking official), official league accounts (e.g., @MLB), media/celebrity (actor, musician, author, etc.), product/company (e.g., @NIKE), and lay person (any individual that did not fit in the above categories)

10-20% subsample used for intercoder (Riffe, Lacy, & Fico, 2008)
- Fleiss kappa coefficients were at or above .75 for all variables (Wimmer & Dominick, 2006)
Results

RQ 1

$\chi^2 (8) = 133.72, p < .01$

Table 1

*Focus of Tweet*

<table>
<thead>
<tr>
<th>Focus</th>
<th>@London2012</th>
<th>#London2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>45.9%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Sport</td>
<td>24.1%</td>
<td>19.8%</td>
</tr>
<tr>
<td>People - No Athletes</td>
<td>2.4%</td>
<td>5%</td>
</tr>
<tr>
<td>Sport Issue</td>
<td>0.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>IOC</td>
<td>0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Host City/Country</td>
<td>15.6%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Other City/Country</td>
<td>0.0%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Media</td>
<td>10.5%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Other</td>
<td>0.6%</td>
<td>8.5%</td>
</tr>
</tbody>
</table>
Results

RQ 2

$\chi^2 (32) = 228.79, p < .01$

Table 2

Sport(s) Mentioned

<table>
<thead>
<tr>
<th>@London2012</th>
<th>%</th>
<th>#London2012</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sport</td>
<td>30%</td>
<td>No Sport</td>
<td>43.8%</td>
</tr>
<tr>
<td>Athletics</td>
<td>14.2%</td>
<td>Athletics</td>
<td>9.2%</td>
</tr>
<tr>
<td>Swimming</td>
<td>5.2%</td>
<td>Swimming</td>
<td>7.5%</td>
</tr>
<tr>
<td>Cycling</td>
<td>4.6%</td>
<td>Gymnastics</td>
<td>7.3%</td>
</tr>
<tr>
<td>Rowing</td>
<td>3.7%</td>
<td>Tennis</td>
<td>4.6%</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>3.6%</td>
<td>Volleyball</td>
<td>3.4%</td>
</tr>
<tr>
<td>Boxing</td>
<td>2.6%</td>
<td>Cycling</td>
<td>3.4%</td>
</tr>
<tr>
<td>Sailing</td>
<td>2.6%</td>
<td>Boxing</td>
<td>3.3%</td>
</tr>
<tr>
<td>Canoe</td>
<td>2.4%</td>
<td>Basketball</td>
<td>3.3%</td>
</tr>
<tr>
<td>Hockey</td>
<td>2.2%</td>
<td>Diving</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Results

RQ 3

$\chi^2(11) = 172.75, \ p < .01$

<table>
<thead>
<tr>
<th>Country</th>
<th>@London2012</th>
<th>#London2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>7.6%</td>
<td>12.5%</td>
</tr>
<tr>
<td>China</td>
<td>6.3%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Russia</td>
<td>3.5%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Great Britain</td>
<td>9%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Germany</td>
<td>1.7%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Japan</td>
<td>1.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Australia</td>
<td>2.2%</td>
<td>1.7%</td>
</tr>
<tr>
<td>France</td>
<td>2.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Korea</td>
<td>2.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Italy</td>
<td>1.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other</td>
<td>24.3%</td>
<td>13.2%</td>
</tr>
<tr>
<td>No Country</td>
<td>37.7%</td>
<td>57.1%</td>
</tr>
</tbody>
</table>
Results

RQ 4
- Lay person (77.8%)
- Media members/celebrities (11.8%)
- Company/product (4.0%), athlete (0.4%), coach (0.3%), and official league account (0.1%)

RQ 5
- Lay people focused on athletes (40.4%), sports (20.1%), and media (8.9%).
- Media members/celebrities also focused on athletes (36.4%), sports (20.3%), and media (19.5%)
Discussion

- **RQ 1**
  - Significant difference between two groups in terms of tweet focus (i.e., topic)
    - @London2012 focused on sport-specific information related to the Olympic Games and the countries therein
    - @London2012 account was more willing to discuss the host city/country
    - #London2012 were willing to discuss issues that were not directly pertinent to the events themselves; instead focused on ancillary topics
  
- Issue or topic salience was not transferred to the audience
  - Due to the technological aspects of Twitter
    - Individuals can choose to follow as many official news outlets
    - Incongruity between perceptions of audience interests by news organizations and actual audience interests
Discussion

RQ 2

Significant difference between @London2012 and #London2012 in terms of sport(s) mentioned

- Greater portion of #London2012 tweets mentioned no sport
- When sport was mentioned in #London2012 greater overlap between sports considered part of the “big four” (i.e., gymnastics, track and field, swimming, and diving)

Could have first occurred not as a result of a transfer of salience in regard to sport from @London2012 to #London2012, but due to an increased level of salience in audiences as a result of the television coverage devoted to these events (Billings 2007; Billings & Angelini, 2007)

- Could also be attributed to the fact that audience members may have been watching these events through their primetime domestic broadcasts
Discussion

RQ 3

@London2012

- Dedicated more of their coverage to other countries besides the top-10 medal recipients
- When a top-10 medal recipient was mentioned, @London2012 dedicated most of their coverage to Great Britain, the United States, China, and Russia
  - This finding is logical as these countries were the top four in terms of medals received

#London2012

- Besides the United States and Great Britain, no top-10 medal recipient received more than 2% of the mentions within #London2012 tweets
- Nearly half of #London2012 tweets mentioned no country at all
  - Mentioning a country was less important to a heterogeneous population compared to a centralized account whose purpose was to disseminate updated news related to athletes, countries, and their accomplishments.
Discussion

RQ 4
- Primarily lay persons and media members/celebrities were utilizing #London2012; athletes and league accounts were found to utilize #London2012 most infrequently
  - Matches up with the findings of Blaszka et al. (2012)
  - Hashtags are a tool favored primarily by the everyday individual as a means to communicate a singular viewpoint or opinion to a larger audience

RQ 5
- Lay people and media members/celebrities focused most of their tweets on athletes, sports, and the media
  - This finding aligns with previous social media research, which found that Twitter has the ability to impact displays of fanship among users (e.g., Blaszka et al., 2012; Clavio & Kian, 2010)
  - Several #London2012 tweets fell into the “other” category
    - Lends support to previous research, which found that Twitter is often used for the purposes of diversion and making non sport-related comments (e.g., Hambrick et al., 2010)
Limitations & Future Research

- Only @London2012 was examined; focused on agenda setting on Twitter; examined agenda setting during the event itself

- The very nature of Twitter complicates the foundation of agenda-setting research
  - Twitter allows athletes to set their own agenda (i.e., #WeDemandChange)
  - Individuals can actively select to follow and receive information from multiple news accounts, which may impact the salience of issues

- Future research efforts should analyze how hashtags are utilized as mechanisms for dissent; use survey methodology to reveal what official news outlets individuals follow to gain a better understanding of how the number of outlets impacts salience
Conclusion

- Efforts to centralize the media message were not successful as significant differences were found between the tweets sent from the @London2012 account and tweets containing #London2012, suggesting no agenda-setting effect was present.

- Although sport organizations can utilize social media to facilitate interactions with various constituencies, initiatives to drive or centralize the media message may not be effective to pursue.

- It appears that hashtags provide individuals with an opportunity to break away from the effects of a traditional media agenda thereby creating and disseminating a unique line of thought and opinion.
Questions?