Comparing U.S. and Australian Twitter Content During Extreme Drought Conditions

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Introduction/Need for Research

Australia and the U.S. have similar dry environments that are subject to natural disasters (Wilhite, 1986). An example is the 2018 extreme droughts in Australia and America. Dry conditions devasted communities across Australia and became particularly heartbreaking as extreme heat destroyed crops and forced farmers to lessen a majority of their livestock herds (Scarr, Wu, Cai, & Inton, 2018). Additionally, cattle slaughter was up by 17% as drought affected the grassy agriculture land (Quackenbush, 2019). In the U.S., drought engulfed half of the country (56%) in the summer months of 2018 (Mersereau, 2018), leading U.S. farmers to yield the smallest wheat crop in more than a decade, down 48 bushels per acre (Associated Press, 2018). Furthermore, ranchers across Texas reduced their herds by 25% during the drought, fueling heavy revenue losses in the beef industry (Warren, 2019).

Researchers have determined, during the 2012-2013 drought in Nebraska, Twitter conversations increased as drought conditions worsen and agricultural issues or extreme weather affected the public (Wagler & Cannon, 2015). Roshan, Warren, and Carr (2016) suggested when large Australian organizations respond to a crisis on social media, they lack an awareness of the potential of social media for crisis communication. These organizations often did not utilize crisis response strategies that may increase reputational risk (Roshan et al., 2016). Furthermore, social media platforms are becoming more prominent tools in crisis communication strategies. The purpose of this study was to explore and compare differences between Australian and U.S. use of Twitter during a natural disaster crisis.

Conceptual Framework

Opinion leaders utilize influence over members of the social system in which they exist (Rogers, 2003). According to Park (2013), opinion leadership via Twitter plays a vital role in motivating individuals who are passionate about an issue to actively use Twitter. Social media should give a voice to its stakeholders who support the organization during a crisis, thus allowing a positive echo on the internet (Coombs, 2015). Additionally, with the rise of social media sites, opinion leaders help organizations understand public opinion in social media (Winter & Neubaum, 2016). Organizations can be recognized as leaders on social media by providing timely information about the important issues facing the public (Wagler & Cannon, 2015).

Methodology

This quantitative study utilized Meltwater, a social media monitoring program, to gather all content relevant to drought in Australia and the U.S., based on keywords and phrases, posted publicly to Twitter between May 1, 2018, and August 31, 2018. These dates were chosen due to the normality of drought in the U.S. during the summer months, and a review of literature showing extreme drought during this time frame in Australia (Braganza, 2019). A social media monitor for U.S. and Australia was created in Meltwater to collect content utilizing a keyword search for “drought” and at least one of the following keywords or phrases: “agriculture” and “livestock”. Content was filtered within the Meltwater dashboard (i.e. metric for showing country content distribution) for tweets within Australia or the U.S. Meltwater provides several tools, called widgets, to analyze the data. Widgets used in this study were sentiment (i.e. positive, negative, or neutral), social reach (i.e. total number of people reached by social

content), and engagement (i.e. conversation that revolves around a brand or organization) of Twitter users. The collected data were analyzed in the Meltwater dashboard to determine the highest social reach of agricultural organizations. The lead researcher then downloaded data to Excel and coded for tweets from agricultural organizations in each country.

Results

The Meltwater social media monitor search resulted in 586 tweets publicly posted to Twitter in Australia and 2,840 tweets in the U.S. Tweet sentiment was primarily negative in Australia (59%), and neutral in the U.S. (58%). In Australia, the highest social reach, posted by Twitter user @Reuters, reached 19.8 million people. In the U.S., Twitter user @Nasa had the highest social reach of 29.5 million. The top agricultural organization, based on social reach analyzed within Meltwater, are shown in Table 1.

Table 1

Twitter Content of Agriculture Organizations with Highest Social Reach in Australia and U.S.

Organization	Number of Tweets	Engagement	Reach
Australia			
ABC Rural	26	786	985,750
National Farmers	12	150	277,714
Vic Farmers	4	5	47,321
U.S.			
Farm Bureau	6	31	144,515
USDA	5	22	126,944
Ag Professional	1	0	38,682

Note: Farm Bureau and USDA data were compiled from all departments of the organizations.

Conclusions

The results of this study indicate sentiment during extreme drought in Australia were negative and neutral in the U.S. Agricultural organizations ABC Rural, National Farmers, and Vic Farmers in Australia had the most content, and the most engagement, and reach, compared to content, engagement, and reach from Farm Bureau, USDA, and Ag Professional in the U.S. ABC Rural, an agricultural news source, was the most active on Twitter during the time frame with the highest social reach of agricultural organizations during the assessment of both countries.

Implications/Recommendations/Impact on Profession

During a crisis, leadership can have an impact on the effectiveness of the crisis management efforts (Coombs, 2015).Thus, followers on Twitter, joined with opinion leaders, take part in creating content for important issues and disseminating information (Hwang, 2015). Social media are becoming more prominent for crisis communication strategies. The results indicated Australian agricultural organizations were more active during the study's time frame than American agricultural organizations and reached more people. Because the results are limited to Twitter, future studies should examine Facebook conversations in Australia and the U.S. during extreme drought.

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