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BEYOND BIG BIRD: THE ROLE OF HUMOR IN THE AGGREGATE INTERPRETATION OF LIVE-TWEETED EVENTS

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How do emergent discourses impact the interpretation of large social media events? A wide body of literature and prototypes in both academia and industry has attempted to aggregate and summarize valences, sentiment, and other linguistic and contextual factors from social media data, though few have taken into account the wide-ranging emergent behaviors of individuals and groups. Debates about the value of measuring opinion through this medium have challenged the interpretation of such techniques to summarize a vast array of contributions (Sifry, 2012; Metaxas et al., 2011; Gayo-Avello, 2011).

This paper contributes to this debate through a multi-faceted analysis of tweets posted during each of the three 2012 presidential debates. Some studies have documented the practice of live-tweeting during televised media events (Bruns & Burgess, 2011; McPherson et al., 2012; Shamma, Kennedy, & Churchill, 2010; Schirra, Sun, & Bentley 2014). We focus on retweeting and livetweeting practices, in particular as they relate to humor, as we suspect prevalent sentiment analysis approaches may overemphasize their importance in political discourse. We examine practices such as the use of humor and sarcasm (Mejova, Srinivasan, & Boynton, 2013), building from and extending our prior work in this area (AoIR 12 CITATION).

During each 2012 presidential debate, we collected tweets matching an evolving set of 427 debate-related keyword rules using the commercial data provider Gnip PowerTrack. Our observation period began one hour before each debate's start and lasted until four hours after the conclusion of the televised broadcast. The full corpus consists of

35,247,043 tweets produced by 5,833,227 unique user accounts (the size of this collection is comparable with statistics reported by journalists and social media analytics firms in the days following the debates [e.g., Sharp, 2012]). Our analysis focuses on the 17,579,576 retweets within these data. Retweets accounted for 49.9% of the total corpus of tweets we collected during the three debates.

In our earlier analysis, we conducted a high-level descriptive analysis of the dataset and a deeper content analysis of the most-tweeted accounts (N=197). This small group produced 18,425 tweets that were retweeted 4,388,446 times collectively during (and in the hours following) the three presidential debates. We found that 62 (31%) of the top quartile of the most retweeted accounts were primarily used for humor, comedy, parody and sarcasm. These 62 humorous accounts were responsible, directly or indirectly via retweet, for 1,370,537 (4%) of all the tweets in our collection. To put this concentration of comic accounts in context, we also coded a random sample of the remaining three quartiles and found that the number of accounts clearly used only for humor was negligible. The results of the content analysis identified accounts that were exclusively comic, however, it was clear that many of the most retweeted tweets were humorous – even if the accounts that sent them were not.

To investigate the use of humor by accounts that are not strictly comedic, we then conducted a content analysis of data at the tweet level, which comprised the contributions of this paper. Other scholars have done this at a large scale (e.g., Suh et al. 2010), but these papers that study the aggregate dynamics of millions of tweets are not particularly useful for studying communicative acts. We look at tweets to see how user networks and comedy valence impact the circulation and visibility of this content during the debates. Using a representative sample of 1503 tweets, we coded for humor and then combine this with other metadata to highlight statistical trends in the ability to predict retweet count. In our initial, when predicting retweet count, follower count accounted for most of the variance in the model, and humor was also a significant predictor. Further, machine learning models showed a high information criterion for both of these variables. We show that humor constitutes a large and important part of debate-related Twitter traffic and discuss the implications for interpreting these tweet in aggregate.

Introducing humor as a variable into aggregate analyses of participatory events online allows us to make a stronger theoretical claim about the mixed and complicated nature of political and social communication on Twitter during the 2012 election season (and, importantly, future political events). The initial findings underscore an urgency for considering humor and other contextual aspects of communication in studies of participatory politics on social media. Our paper in particular explores the realm beyond "the popular": while many have focused and will focus on bursts (Lin et al. 2015) like Big Bird or "binders full of women" (Freelon & Karpf 2015), our analysis shows the widespread spectrum of trends in social media chatter at all levels of communication.

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