Public Sentiment and Critical Framing in Social Media Content During the 2012 U.S. Presidential Campaign

Jacob Groshek[1] and Ahmed Al-Rawi[2]

Abstract
By being embedded in everyday life, social networking sites (SNSs) have altered the way campaign politics are understood and engaged with by politicians and citizens alike. However, the actual content of social media has remained a vast but somewhat amorphous and understudied entity. The study reported here examines public sentiment as it was expressed in just over 1.42 million social media units on Facebook and Twitter to provide broad insights into dominant topics and themes that were prevalent in the 2012 U.S. election campaign online. Key findings include the fact that contrary to what one might expect, neither presidential candidate was framed in an overly critical manner in his opponent's Facebook space nor on Twitter's dedicated nonpartisan election page. Beyond this, similarities and divergences in sentiment across social media spaces are observed that allow for a better understanding of what is being communicated in political social media.

As online technologies and experiences have become more embedded in everyday life (Ogan, Ozakca, & Groshek, 2008), social networking sites (SNSs) such as YouTube, Twitter, and Facebook have increased drastically in popularity, content, and potential political influence. In light of this trend, nearly all politicians now incorporate some forms of online social media campaigning based on the idea it may help shape the outcome of elections. Research into this growing arena has thus far identified that certain social media platforms can facilitate individual political attitudes and behaviors that are positively related to mobilizing political participation and engendering more political engagement (Rheingold, 2008; Shah et al., 2007; Towner, 2012). Other studies (Kushina & Yamamotb, 2010; Zhang, Johnson, Seltzer, & Shannon, 2010) have reached somewhat competing findings, but based on their reflexive and user-driven communicative qualities, Gueorguieva

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[1] College of Communication, Boston University, Boston, MA, USA
[2] School of History, Culture and Communication, Erasmus University, Rotterdam, Netherlands

Corresponding Author:
Jacob Groshek, 640 Commonwealth Ave., Boston, MA 02215, USA.
Email: jgroshek@gmail.com

(2008) noted that the political importance of SNSs is increasing, especially for voters whose political activities are not bound to physical locations in order to be involved in politics (Stromer-Galley & Foot, 2002).

Altogether, social media are now regularly examined in elections as outlets of political communication, but while the individual-level influence of SNSs on citizens are often reported, the actual content of social media has remained (with some exceptions) a more amorphous and understudied entity (de Boer, Suetfeld, & Groshek, 2012; Meraz & Papacharissi, 2013; Woolley, Limperos, & Oliver, 2010). While it is clear from an overview of the literature that SNSs have altered the way campaign politics are communicated and engaged with by politicians and voters, some pressing questions remain: What is being said in this largely user-generated content and how can this voluminous discursive space be reasonably understood?

This study takes on these questions, examining public sentiment as it was expressed in hundreds of thousands of social media units on the official Facebook pages of Barack Obama and Mitt Romney as well as the #election2012 hashtag on Twitter. Key findings include the fact that contrary to what one might expect, neither presidential candidate was framed in an overly critical manner in his opponent's Facebook space or on Twitter's dedicated nonpartisan election page. This study thus fills a void in existing research and provides broad insights into online campaigning and user-produced social media content in the 2012 presidential election.

User-Generated Framing and SNSs in Political Communication Outcomes

Nisbet (2010) argued that there is a need to study framing in digital media that will mark a shift from previous studies that had focused on the "transmission model of traditional news framing effects to a more interactive, social constructivist, and 'bottom up' model of framing" (p. 75). This bottom up, or emergent, conceptualization is important to consider because it changes the focus of framing studies from traditional media and hierarchical gatekeepers to ordinary, everyday citizens that easily and regularly produce (online) media, and who ultimately become "active contributors, creators, commentators, sorters, and archivers of digital news content" (Nisbet, 2010, p. 75).

In one example of a "bottom up" analysis in Facebook groups created to support either Barack Obama or John McCain during the 2008 U.S. presidential elections, Woolley, Limperos, and Oliver (2010) observed a high degree of similarity between Facebook posts and mainstream media coverage. However, other research has suggested that content circulated on SNSs cannot only follow and repeat official agenda items and media frames but also reciprocally enter the mainstream media agenda and lead framing of certain items and issues (Meraz, 2011; Ragas & Kiousis, 2010; Sayre, Bode, Shah, Wilcox, & Shah, 2010). Where these lines of thought converge is in identifying that SNS sites are important tools in setting political agendas and advancing or reiterating certain frames and that a variety of nonelite actors can be pivotal in this process (Meraz & Papacharissi, 2013).

Furthering this line of inquiry, Robertson (2011) examined 687,626 Facebook posts made by the friends of candidates during the 2008 U.S. election campaign. With the Linguistic Inquiry and Word Count (LIWC) software program, a change in the sentiment of the posts identified a "reflection-to-selection" process. During the early months of the campaign, posts were more positive than those sent much closer to Election Day, which was reported as being due to the "need to engage the competition and turn outwards" in order to "reduce positive discourse and/or increase negative discourse" (Robertson, 2011, p. 2).

Similar studies on the use of Twitter during elections have begun to identify notable patterns and relationships to political variables (Ampofo, Anstead, & O'Loughlin, 2011). In one example, Tumasjan, Sprenger, Sandner, and Welpe (2011) studied whether public sentiment on Twitter could predict the results of the 2009 German Federal elections. By investigating over 100,000 messages,

their study found a strong correlation between the number of references on Twitter to political parties or figures and the election results, and a further analysis of sentiment in Tweets demonstrated a close connection with voters' preferences. Similarly, in an analysis of the 2010 national elections in the Netherlands, Effing, van Hillegersberg, and Huibers (2011) found that Dutch politicians who were more active on social media earned more votes. These results suggest that in some cases content and sentiment on SNSs can reflect or even predict public opinion, not unlike polls.

Building from this overall body of research, the study reported here contributes to filling a vital gap in the literature by investigating aggregated public sentiment in hundreds of thousands of user-produced messages on both Facebook and Twitter. The models produced here conceptually follow the work of Pang and Lee (2008, p. 10) in treating "sentiment" as opinions expressed in "evaluative text and . . . predicative judgments therein."

Sentiment analyses in the present study proceed with the purpose of identifying dominant topics and emergent frames as presented and discussed in social media content regarding the main actors and issues during the 2012 presidential election. The assumption is that the sentiment observed within these spaces may well reciprocally reflect or lead public opinion and traditional (mass) media agendas. In this regard, it is expected that Barack Obama and Mitt Romney will be framed somewhat critically in the opponent's Facebook space. Further, the study also considers how massively large flows of "news" on SNSs are collaboratively cocreated by crowds and suggests what an average visitor to the official Facebook pages of Barack Obama and Mitt Romney or the #election2012 hashtag on Twitter would have been likely to encounter.

Mining the Media for the (Users') Message: Facebook and Twitter

A recent Pew Internet and American Life Project survey indicated that 36% of respondents considered SNSs as either "very" or "somewhat" important to them in following political news and approximately one quarter indicated that SNS sites are important in discussing and engaging others on political matters (Rainie & Smith, 2012). In addition, 25% of SNS users in the Pew sample self-reported that they became more active in discussing politics after viewing political posts on SNSs while 16% claimed to have altered their opinion about a political issue after engaging with the topic on SNSs (Rainie & Smith, 2012).

Statistics released directly by Facebook showed that in terms of political issues and topics, "Barack Obama," "Mitt Romney," "voted," "four more years," and "Paul Ryan" were the five most popular trending topics in 2012 (Facebook Politics, 2012). As for events, the "US presidential election" was the top trending issue on Facebook, followed by "Superbowl XLVI" and the "death of Whitney Houston" (Facebook Events, 2012). Considering these overarching trends, the official Facebook pages of Barack Obama and Mitt Romney can thus be conceptualized as useful, albeit not exclusive, spaces that can shed further light on the campaign conversations that were taking place on Facebook, one wide-reaching social media channel in the 2012 election.

Of course, Twitter (perhaps more so than Facebook) also played an important and central role for politicians and citizens to communicate about, to, and with one another during this election. According to statistics released by Twitter, there were 327,452 Tweets per minute (TPM) on election-related topics at the time when television networks called Obama's reelection, making this the "largest election-related Twitter conversation" ever (Twitter Engineering Blog, 2012). Indeed, the Election 2012 was of such predetermined importance that "Twitter government also set up a dedicated page for the [#election2012] hashtag, which curated tweets, videos and photos from the election and refreshed in real-time" (Shewakramani & Miguel Lago, 2012, p. 1).

Effectively, this study reports findings from two separate inquiries: one that considers officially sponsored partisan Facebook pages for each candidate over the course of the campaign and one that

examines an unendorsed nonpartisan Twitter page for Election Day itself. In this way, cautious comparisons across social media channels may be developed.

More specifically, while statistics such as those reported above are useful in understanding social media spaces and *what* is being discussed, they do little to identify *how* key terms were being discussed (positively, negatively, or in context with other key words and phrases). In order to make sense of what is being said in large volumes comprising hundreds of thousands of user-generated SNS content units analysis that goes beyond examining simple frequencies of key words and trending topics is necessary.

With this in mind, the study reported here poses a number of research questions to advance an understanding of social media content and the sentiment it conveyed in this particular election.

> *Research Question 1:* Which items were most prominent on the official Facebook pages of (a) Barack Obama and (b) Mitt Romney, and the (c) #election2012 Twitter page?
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> *Research Question 2:* How was Barack Obama framed by citizens on (a) his own Facebook page and (b) the Facebook page of his opponent, Mitt Romney?
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> *Research Question 3:* How was Mitt Romney framed by citizens on (a) his own Facebook page and (b) the Facebook page of his opponent, Barack Obama?
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> *Research Question 4:* How were (a) Barack Obama and (b) Mitt Romney framed by citizens in the explicitly nonpartisan #election2012 Twitter page on Election Day?

Method

This examination of sentiment in social media as it related to the 2012 presidential election in the United States was carried out in a number of purposefully selected social media spaces. The official Facebook pages of both the Democratic and the Republican presidential candidates, Barack Obama (facebook.com/barackobama) and Mitt Romney (facebook.com/mittromney), were targeted to get a sense of what was being written in two officially endorsed partisan channels. Within the parameters of the Facebook application programming interface (API), every status update provided by each candidate was scraped using the cloud-based software system DiscoverText, along with every comment made by any Facebook friend or follower on these pages. The time frame for harvesting this content began with January 1, 2012, and ran until 1 day after the election was called in favor of Obama (November 7, 2012). This period allows for consideration of nearly the entire campaign season.

One additional channel, the #election2012 hashtag on Twitter (twitter.com/#election2012) was also harvested for analysis. Because the volume of Tweets was drastically greater than were posts to Facebook it was not feasible to archive all Tweets for 10 months. Therefore, the body of texts analyzed here considers only a 24-hr window of time from 11:30 p.m. (EST) on November 5, 2012, until 11:30 p.m. (EST) on November 6, 2012, containing nearly 1 million #election2012 Tweets. This decision follows from most accounts that NBC News first called Ohio for President Obama at 11:12 p.m. (EST) on Election Day of November 6, 2012; other networks followed suit shortly thereafter (Mirkinson, 2012).

The inclusion of #election2012 also provides an official, but nonpartisan space that was initiated and maintained by a third party (Twitter, in this case). All available Tweets were scraped using the DiscoverText interface, which utilized the GNIP Power Track that is often referred to as the "full fire hose" or "fat pipe" for archiving Tweets. The GNIP Power Track access allows for an opening up of the restrictive public Twitter API and provides a greater corpus of Tweets to analyze than is normally available.

The time frames identified target content from both the campaign as a whole and the most pivotal day of the election. Once texts were scraped, they were exported to a database and entered into the

text-based sentiment software, WordStat. This program made it possible to track not only the most common key words, terms, and phrases but also to measure the statistical and conceptual distances between certain topics. In other words, the program reported what terms were frequently being discussed in these spaces and identified other words with which they were being discussed. In this way, this study was able to get a sense of not only what people were saying in social media about Mitt Romney or Barack Obama but how they were characterizing each of the candidates with the words and phrases that appeared within the same paragraph (or Tweet, as it were).

This approach has the benefit of mining emergent framing descriptors from within the body of text rather than imposing a scheme of predetermined categories that may be otherwise unrelated to the texts themselves (Groshek & Engelbert, 2013). Evaluations of key words and identified relationships are based largely on the notion of whether or not terms could be considered "critical," and were based on authors' interpretations of terms that either expressed criticism toward a candidate or opposition to a candidate's proposals (Groshek, 2008).

Many of the analyses reported in this study are based on the calculation of Jaccard's coefficient. This statistic considers pairs of words that occur with one another in the same paragraph unit measured against the frequency of these words occurring without the other (Tan, Steinbach, & Kumar, 2006) and has a range of 0.0 (no co-occurrences) to 1.0 (perfect co-occurrences). Because Jaccard's is sensitive to sample sizes (and here sampling reached hundreds of thousands of units) there is no baseline figure for determining "strong" or "weak" relationships. However, comparisons of relative strength have been made on these coefficients within and across samples.

Findings

Analyses began by examining all 204,525 Facebook status updates and ensuing comments from Barack Obama's official Facebook page for all of 2012 until one full day after the election took place. At the time of writing, this page had 34,640,989 "likes" and 1,821,558 people on Facebook were "talking about this." All analyses excluded common English words from consideration (e.g., at, the, of, about, a, and other single letters).

With these criteria applied, the most frequent 10 key words observed in investigating Research Question 1a were "Obama," "Romney," "President," "vote," "people," "years," "country," "Mitt," "good," and "America." (see Table 1). The two most frequent key words, "Obama" and "Romney" were then jointly plotted in proximity with other words that most regularly co-occurred on Barack Obama's official Facebook page to gain a sense of how each of these candidates were being discussed in this space. Apart from obvious and relatively strong linkages such as "Romney" with "Mitt," where Jaccard's coefficient of occurrence (J) was equal to 0.137, normative and evaluative descriptors were also found.

In examining Research Questions 2a and 3b, how each candidate was framed on Barack Obama's official Facebook page, the term "vote" co-occurred regularly with both "Obama" ($J = 0.103$) and "Romney" ($J = 0.088$) in the same paragraph, but there were also some divergent terms. "Obama" appeared often with the words "good" ($J = 0.036$) and "love" ($J = 0.032$), for example, whereas "Romney" was mentioned more regularly with "debate" ($J = 0.040$), "plan" ($J = 0.035$), and "jobs" ($J = 0.035$). Somewhat critically (depending on the context), "Obama" was linked with "Bush" ($J = 0.032$), but there were far more overtly critical key words associated with Romney. These included "lies" ($J = 0.030$), "liar" ($J = 0.024$), and "rich" ($J = 0.023$), though there were also some positive associations such as "good" ($J = 0.027$) and "win" ($J = 0.025$).

Though this analysis was not able (due to volume and processing limitations) to calculate coefficients of co-occurrence for all phrases[1] and more precisely determine the context of each statement, it instead found trends and patterns in words and phrases across the corpus of all included texts. Here, some evidence suggests that Romney was treated somewhat critically in the sentiment of

Table 1. Frequency of Key Words on Official Social Media Spaces.

Rank	Obama Facebook	Romney Facebook	#election2012 Twitter
1	Obama	Obama	Election
2	Romney	Romney	RT [Retweet]
3	President	Mitt	Obama
4	Vote	People	Romney
5	People	Vote	Vote
6	Years	President	Wins
7	Country	Country	President
8	Mitt	America	Win
9	Good	Years	Mitt
10	America	Ryan	AP
11	Love	Jobs	Voted
12	Time	Good	Voting
13	Man	Money	News
14	God	Time	America
15	Make	Make	Florida
16	Barack	God	Today
17	Bush	Man	State
18	American	Job	Votes
19	Jobs	Voting	States
20	Voting	American	Ohio

comments posted to the official Facebook page of his opponent, Barack Obama. A concept map based on the agglomeration order of Jaccard's coefficient in examining interrelationships between concepts (see Tan et al., 2006) situated key words and concepts visually in relation to one another. There were a total of 150 possible clusters built around the 200 most frequent terms. The conceptual groupings, along with the strongest linkages between terms and clusters, are spatially mapped by Figure 1 as presented in the corpus of all comments and updates that appeared during the election in 2012. Of particular note for comparative purposes is the relatively central positioning of "Obama" to other concepts within the map (which is to be expected), as well as unique linkages between somewhat less prevalent key words such as "women" with "health," "taxes" and "middle class," and "God" as it directly connected to "President."

Similarly, the body of text (299,071 updates and comments) from Mitt Romney's official Facebook page was collected and analyzed for descriptors and sentiment by key words and phrase relationships for the same time period. By the time the election had concluded, this page had 11,773,409 "likes" and 18,072 were "talking about this," drastically less (by millions) than Barack Obama's official Facebook page.

Among this sample of text, the most frequent key words found in examining Research Question 1b were "Obama," "Romney," "Mitt," "people," "vote," "President," "country," "America," "years," and "Ryan" (again, see Table 1). Again, the two most frequent key words, "Obama" and "Romney" were jointly ranked by Jaccard's coefficient against other words descriptors found on Romney's official Facebook page. Unlike Vice President Joe Biden, Romney's running mate Paul Ryan was highly visible in texts with "Romney" ($J = 0.127$), but this is almost certainly the result of the hype surrounding the selection of a presidential running mate (Baumgartner, 2008).

Analyses proceeded with avoiding redundant and readily apparent linkages and found a number of similar terms associated with both candidates. Both "Romney" and "Obama" were associated often with "vote" ($J = 0.101$ and $J = 0.088$, respectively) as well as "President" ($J = 0.079$ for "Romney" and $J = 0.093$ for "Obama"). "Romney" again was featured regularly in this corpus

Figure 1. Concept map between key words on official Barack Obama Facebook page.
Note. $R^2 = .176$, Stress $= .433$.

with "jobs" ($J = 0.033$), "plan" ($J = 0.031$), and "good" ($J = 0.031$). "Bush" ($J = 0.031$) again co-occurred regularly with "Obama," as did "jobs" ($J = 0.031$), "good" ($J = 0.031$), "care" ($J = 0.029$), and "money" ($J = 0.029$).

One particularly notable aspect of this analysis is that in Romney's Facebook space, there was no clear evidence of aggressive or critical signifiers surrounding Obama. Though it is evident that "Obama" was linked to "lies" ($J = 0.024$) and "debt" ($J = 0.021$), such negative associations were sporadic and less common than, for example, "Romney" with potentially positive descriptors such as "God" ($J = 0.027$) and "money" ($J = 0.026$). Due to the volume of units analyzed the strength association for all phrases[2] could not be calculated efficiently, but it is clear that there are many unique features in the frequencies and co-occurrences of descriptive and evaluative terms across these discursive spaces.

Using Jaccard's coefficient criteria, this corpus of texts was also agglomerated to spatially map conceptual distances between regularly occurring key words. A somewhat greater number of clusters (240) were applied to match the variance explained in the previous model. In this case, the R^2 was .175 and the Stress measure equaled .437 in specifying a comparative concept map. As depicted in Figure 2, though a good amount of key terms are similar between the two official Facebook pages of the candidates, there was a much stronger clustering of "Romney" to "Obama," "vote," and "President" on the Romney site. "Women" were less connected conceptually to the campaign, and while "middle class" was again prominent it appeared more centrally linked to "government," "tax," and "jobs." In addition, "liberal" and "media" clustered together with only each other, as did "Fox" with "news," and "foreign" with "policy."

The final round of analysis took into consideration the 923,611 Tweets that were scraped with the #election2012 hashtag from Twitter during the 24-hr period of time prior to when the election was called in favor of Obama. Perhaps not surprisingly, this corpus presented a fairly different range of most regularly recurring key words. In order of frequency as posited by Research Question 1c, these were

Figure 2. Concept map between key words on official Mitt Romney Facebook page.
Note. $R^2 = .175$, Stress $= .437$.

"election," "RT" (shorthand for "ReTweet"), "Obama," "Romney," "vote," "wins," "President," "win," "Mitt," and "AP" (see Table 1). "Obama" and "Romney" were again considered in joint prox-imity plots, even though they were the third and fourth most frequent key words (respectively) in this sample.

As with previous analyses, certain terms were shared between the candidates, and that pattern held with these nearly one million Tweets. Exploring candidate framing by citizens in a nonpartisan social media space as outlined in Research Questions 4a and 4b, the key words "RT," "election," and "wins" were commonly co-occurring key words for both "Obama" ($J = 0.265, 0.256, 0.095$) and "Romney" ($J = 0.227, 0.186, 0.125$). The divergences were once again not highly critical, and almost all of the most common recurrent terms suggest a certain level of evenness in the expression of ideas. As examples, "state" ($J = 0.061$), "Mass" (shorthand for "Massachusetts") ($J = 0.033$), and "losing" ($J = 0.035$) co-occurred more regularly with "Romney," whereas "HuffingtonPost" ($J = 0.037$), "Pennsylvania" ($J = 0.036$), and "won" ($J = 0.036$) were noticeably more prevalent in Tweets mentioning "Obama." There was little direct evidence of the Twittersphere (on aggregate) turning into a critical discursive space of heated rhetoric. By and large, the expressions tracked here seem to imitate previous patterns of coverage shown by more traditional forms of media in reporting events (Woolley et al., 2010).

A concept map was again developed to examine the strength of relationships between key words and concepts with each another for this particular corpus. This map was perhaps the most revealing of the three and apart from keying into the strong and central interlinkages of "election," "RT," "Obama," and "Romney," it highlights important features of Election Day that were circulated widely on this highly visible and popular Twitter hashtag. These included "AP call race" with "wins," and both "Obama" and "Romney." "Mitt losing Mass" and "Ryan" with "lost," "home," and "state" also came to the fore, as did other ancillary measures such as "Colorado" with "marijuana" and "Elizabeth" with "Warren" and "Democrat Senate." In order to not overwhelm

Figure 3. Concept map of spatial distances between key words on #election2012 Twitter page.
Note. $R^2 = .108$, Stress $= .437$.

software capabilities with the sheer volume[3] of data presented by this corpus, there were 120 clusters limited to the 175 most frequent terms. See Figure 3.

Discussion and Conclusion

This study set out to examine three of the most visible, popular, and active social media spaces for the 2012 presidential election with the focus being understanding which issues and themes were being communicated in this user-generated content. Analyses identified and compared dominant framing key words that emerged from within each of these platforms and further measured the extent to which word associations were similar in unique communicative time spaces on Facebook and Twitter.

When looking at the first research question, it was clear that there were interesting similarities and differences in which items were most prominent on the official Facebook pages of the two candidates, as well as the nonpartisan #election2012 space maintained on Twitter. Perhaps not surprisingly, the most frequent topics on both Facebook pages were highly interrelated whereas the Twitter space was much more diverse and broad.

In examining Research Questions 2 and 3, and the ways in which candidates were framed by citizens in both explicitly supportive and oppositional partisan Facebook pages, the findings were a bit more revealing. On his own official (supportive) Facebook page, "Obama" was regularly mentioned with positive descriptors such as "vote," "good," and "love," and these linkages were in all cases stronger than similar associations made to "Romney." While there were a small number of positive terms attributed to Romney, each of these key word associations were considerably weaker than for Obama. Moreover, "Romney," as positioned in this sample was the key word most regularly and strongly linked to overtly negative descriptors such as "lies," "liar," and "rich" when compared to the other social media samples included in this study.

When considering the framing of ''Obama'' on the Facebook wall of Romney (Research Questions 2b and 3a), a somewhat similar pattern emerged in that many of the key words and most frequent terms appeared in both corpuses. For example, both candidates' names again regularly co-occurred with ''vote'' as well as ''President,'' but there was a less obvious sense of endorsement for Romney in this space than there was for Obama in his (e.g., ''good'' was equivalently associated to both candidates in this corpus). ''Romney,'' however, was again strongly linked to ''jobs'' as well as ''plan,'' but these associations were only marginally stronger than those to ''Obama.''

Perhaps the most notable finding was the readily apparent lower level of expressly critical key words associated with ''Obama'' in what was, for him, an oppositional media space. Though there were some signifiers, notably ''lies'' and ''debt,'' connected to Obama, these were less pointed, weaker, and less clearly associated with other critical key words than ''Romney'' faced on Obama's official Facebook page. Again, while it would be incorrect to conclude from this analysis that criticism or hostile key words toward Obama were not present in this corpus, the overarching pattern was one of more general ambivalence, both in endorsing Romney and in attacking Obama. In neither case was sentiment of opposition candidates overly critical—a somewhat surprising finding given the stakes (a presidential election) and recent trends in public discourse in public media.

Thus, when looking at Research Questions 2 and 3, it was clear that there were similar key words in both corpuses, but there were a number of uniquely applied framing techniques across these two spaces that differentiated them from one another (Robertson, 2011; Woolley et al., 2010). The conditions did not change drastically for either candidate whether in a supportive or oppositional social media space, though the corpus of texts on Obama's Facebook page featured more explicit and regular criticism of Romney. This finding also suggests that the wide patterns of dominant phrases and key words were not overwhelmingly critical—in fact, the treatment of both candidates could be described as quite balanced. Though this finding is at odds with some previous research that suggests social media, namely blogs and YouTube, may be highly partisan and confrontational (Baum & Groeling, 2008; Brundidge, 2010; de Boer et al., 2012; Wojcieszak, 2010), it also aligns with other key findings in reiterating other social media channels—Facebook in particular—is often less a source of original content creation (Groshek & Clough Groshek, 2013; Robertson, 2011; Robertson, Vatrapu, & Medina, 2010) and more of second-hand sharing that may result (relatively speaking) in less outwardly and personally critical content. This may be due to the fact that Facebook users are not—by terms of service and convention—anonymous or difficult to identify.

These findings were generally borne out in concept maps derived from each social media outlet analyzed here. Though there were some exceptions, notably on the prominence and interconnectedness of ''women'' on Obama's Facebook postings and comments, other key terms were endemic to Romney's as well. The ''middle class'' figured prominently in both of these discursive spaces, as did ''taxes'' and ''jobs,'' though the clustering was more tightly but less centrally formed around ''Obama'' and ''President'' in the sample of Romney Facebook updates and comments. In reporting on Research Question 4, more notable divergences were certainly observed when looking at the concept map of 923,611 Tweets from the nonpartisan #election2012 social media space.

Indeed, as an overall body of communicative discourse, the Twitter channel considered here was the least openly critical for either candidate and featured the widest variety of dominant key words. During the final 24 hr before the election was called in favor of Obama, the framing that took place on the ''official'' Twitter election channel seemed to imitate that which could be reasonably expected from a real-time news feed from most any mainstream network television outlet (though to be clear, this study did not collect or analyze such content). As pointed out by Hermida (2010), Twitter has become a type of ambient journalism that now permeates mainstream (mass) media coverage and likewise reciprocates building coverage on many agenda topics initiated by those traditional media outlets (Thelwall, Buckley, & Paltoglou, 2011).

It is fairly crucial to note here that, in regard to the Research Question 4a and 4b, the frames that emerged around the candidates were more generally connected to a wide scope of unique issues and concept clusters. There were very few critical key words present, and though some negative key words did emerge (e.g., "half nation loses," and "Romney" and "Ryan" both "lost home state"), the communicative discourse in this space largely took on the tone of "objective" if not fully "professional" election reporting, at least in aggregate. In relation to the notion of media co-production and the framing of candidates by citizens in an explicitly nonpartisan social media space, findings observed here situate the dominant news flows that took shape on #election2012 throughout Election Day as, in some ways, collectively reproducing the sort of coverage that could typically expected from more traditional mass media—namely broadcast television coverage.

Though there was little evidence of Twitter content being overly critical, there were 2 items that warrant additional attention. "DickMorrisTweet" figured prominently in the Twitter corpus, and Morris regularly appears on Fox News and made a well-known but erroneous prediction of a landslide Romney victory. In addition, there was some vulgarity recurrent through #election2012 coverage (see Figure 3) that would certainly not be normally present in traditional forms of broadcast mass media coverage.

However collectively, the 1,427,207 Facebook and Twitter comments communicated, scraped, and analyzed in this sample seemed to be more similar to mainstream traditional news reporting than vitriolic flaming and hostile projections of competing truth claims that have been recorded elsewhere (Baum & Groeling, 2008; de Boer et al., 2012; Wojcieszak, 2010). Some of this outcome may, of course, be the result of the analytic approach of attempting to make sense of such a large body of texts. Yet, when taken as a whole, this research gives a reasonable conceptualization of what an "average" visitor to the official Facebook pages of Barack Obama and Mitt Romney or the #election2012 hashtag on Twitter would be likely to encounter, while also tracking the dominant key words, their criticality, and strongest relationships to other concepts.

This study proceeded with the understanding that the sentiment observed within social media spaces may well reciprocally reflect or lead public opinion, voting behavior, and traditional (mass) media agendas (Ampofo et al., 2011; Effing, van Hillegersberg, & Huibers, 2011; Kushina & Yamamotb, 2010; Meraz, 2011; Sayre et al., 2010). While a predictive linkage between social media and voting was not advanced (see Tumasjan, Sprenger, Sandner, & Welpe, 2011), this study provided a content analysis of framing and public sentiment as it existed in several very popular and influential social media channels. Results observed here contribute to an important area of inquiry that often considers the influence of using SNSs but typically understudies the content, framing, and production of media within those spaces.

When taken in aggregate, the news and information circulated within these central and officially sponsored (i.e., not fringe or extremist) social media appear to be relatively conformist with expectations of content that would be encountered in typical mainstream mass media (Woolley et al., 2010). In addition, the content reported across unique SNSs (in this case, Facebook and Twitter) over separate long- and short-term time frames, respectively, must be conceptualized differently. From simple metrics such as volume to more in-depth measures such as criticality, it is clear that scholarship and discussion in this area cannot simply group "social" or "new" media together under one umbrella of audiences, content, or effects—and findings from one SNS should be extrapolated from one to another with great circumspection and prudence, if at all.

This study has shown that among other key features of the 2012 U.S. election there may be a high level of similarity in content and framing between different sites within election content on a given SNS (Facebook) over a long period of campaigning. In addition, the critical tone that might have been expected in explicitly partisanship media spaces was on the whole not dominant or even very prevalent, and it seems that citizens communicating on both Facebook and Twitter are collectively coming to approach a certain balance over extended time frames and effectively "live" reporting

election news that follows (albeit imperfectly) standards and topics integral to traditional, professional forms of broadcast media.

Of course, the implications and effects of social media content still require far more study, and future research necessarily must also unpack micro as well as macro trends. Still, public sentiment in hundreds of thousands of social media units can be powerful predictors of public opinion and political outcomes (Ampofo et al., 2011; Robertson, 2011), and this study provides a basis from which content-based models of explanatory media mechanisms in elections can proceed.

Declaration of Conflicting Interests

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Notes

1. In answering Research Question 1a, the 20 most frequent two- to five-word phrases were as follows: President Obama, Mitt Romney, Barack Obama, middle class, vote for Obama, God bless, White House, good luck, vote Obama, health care, United States, years ago, American people, vote for Romney, voting for Obama, President Barack, Obama supporters, food stamps, President Barack Obama, and team Obama.
2. With regard to Research Question 1b, the 20 most frequent two- to five-word phrases in this instance were Mitt Romney, Ron Paul, middle class, President Obama, White House, God bless, vote for Obama, vote for Romney, United States, Paul Ryan, good luck, vote Romney, American people, Barack Obama, Obama supporters, health care, years ago, vote for Mitt, and vote Obama.
3. Considering Research Question 1c, the 20 most frequent two- to five-word phrases Tweeted on the #election2012 hashtag (without redundancies) were Mitt Romney, Romney wins, Obama wins, Barack Obama, Election Day, President Obama, AP race call, Fox News, Electoral votes, United States, news projects, Retweet for Obama, Romney losing, favorite for Romney, people don't, presidential election, Elizabeth Warren, state that he governed, Mitt Romney losing in Mass, polls close, and Electoral College.

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Author Biographies

Jacob Groshek's (PhD, Indiana University) research interests include the democratic utility of communication technologies and the ways in which the structure, content, and uses of online and mobile media may influence political change. Additional research pursuits include applied econometric analyses, data mining, and media ethics. Recent publications in these areas appear in *Journal of Communication, International Communication Gazette*, and *Journal of Broadcasting and Electronic Media*, among others. With his lovely wife, he is a proud father of two and enjoys fishing in his free time. He may be contacted at jgroshek@gmail.com.

Ahmed Al-Rawi teaches media and communication at the School of History, Culture and Communication at Erasmus University Rotterdam in the Netherlands. He authored over 30 book chapters and peer-reviewed articles in a variety of journals and a book entitled *Media Practice in Iraq* (Palgrave Macmillan, 2012). His research interests include social media, Arab media, and popular culture. He may be contacted at alrawi@eshcc.eur.nl.