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# The more attacks, the more retweets: Trump's and Clinton's agenda setting on Twitter

Jayeon Lee[a,*], Weiai Xu[b]

[a] Department of Journalism & Communication at Lehigh University, 33 Coppee Dr., Bethlehem, PA 18015, United States
[b] Department of Communication at the University of Massachusetts Amherst, 650 N. Pleasant St., Amherst, MA 01003, United States

ABSTRACT

The present study aims to contribute to the agenda setting theory and political campaign literature by examining candidates' tweets and their effects on voter reactions in the context of the 2016 U.S. presidential election. Content analysis of Donald Trump's and Hillary Clinton's 3-month tweets ($N = 1575$) revealed that half of their tweets were attacks, and those attacks were effective in attracting favorites and retweets for both candidates. Their tweets reflected their issue agendas highlighted on campaign websites, and they mainly emphasized issues owned by their parties in both venues. Some of the issues Trump stressed in his tweets (i.e., media bias and Clinton's alleged dishonesty) drew significantly more favorites and retweets, suggesting public agenda setting possibilities through Twitter. None of the issues Clinton emphasized were significant predictors of favorites and retweets. However, visual elements such as pictures and videos were effective in bringing voter reactions for Clinton. While Clinton sent twice as many tweets as Trump did during the three months, Trump's tweet received in average three times as many favorites and retweets as Clinton's. Overall, the results show that Trump was more successful than Clinton in drawing public attention to preferred issues through Twitter.

## 1. Introduction

Since social media emerged as a platform for news and political discourse in the past decade (Shirky 2011; West, 2013), political actors have actively used the new digital outlets to reach out to wide audiences, raise awareness of issues they care about, promote their viewpoints, mobilize supporters, and receive feedback in real time (Broersma & Graham, 2012; Golbeck, Grimes, & Rogers, 2010; Kapko, 2016). Some studies suggest that social media activities are closely related to electoral outcomes (DiGrazia, McKelvey, Bollen, & Rojas, 2013; Kruikemeier, 2014; Williams & Gulati, 2008), which seem to motivate political candidates to manage multiple social media accounts during campaigns. In particular, Twitter has become a necessity in political campaigns. Since President Obama's social media campaign, which successfully mobilized young voters, political consultants have heavily relied on Twitter to push their candidates' agendas (Kapko, 2016). According to Adam Sharp, Twitter's head of news, government, and elections, "it was less Twitter coming to politics, and more politics coming to Twitter and finding it as a platform to communicate and to organize effectively without a lot of the costs" (Newkirk, 2016). Twitter allows candidates to put forth their opinions, and gauge voter reactions without passing through mainstream media's gatekeeping process (Wang, Luo, Niemi, Li, & Hu, 2016). Also, candidates' tweets that are highly shared by people are usually picked up by journalists, shaping their news coverage (O'Connor, 2009; Parmelee & Bichard, 2011; Parmelee, 2014). In the 2012 U.S. presidential race, a 4–6% increase in the number of Twitter mentions of

* Corresponding author.
  *E-mail addresses:* jayeon.lee@lehigh.edu (J. Lee), weiaixu@umass.edu (W. Xu).

a politician was related to a 10% increase in the number of media mentions for the person (Hong & Nadler, 2012).

Twitter was indeed a key battleground in the 2016 U.S. presidential race (McCabe, 2015). In 2016, all of the U.S. presidential candidates used Twitter to deliver attention-grabbing one-liners to the public (Hwang & Wooley, 2016). In particular, Donald Trump, then Republican candidate, received huge public attention as well as heavy media criticism for his unconventional campaign tweets including a 3AM outburst against a former Miss Universe and repeated insults at the news media and other politicians. The news media criticized Trump's incendiary and uncivil tweets as unpresidential. At the same time, he was evaluated as to have "mastered Twitter in a way no candidate for president ever has" (Barbaro, 2015) and "built his brand" with "striking online dominance" (Barbaro, 2015). His Twitter account @realDonaldTrump was called "a force, a newsmaker, an agitator, and American political phenomenon that combines the high profile of a presidential candidate with the reach and velocity of social media" (Keohane, 2016). Trump won the election, and it was said that his controversial Twitter strategies worked to his advantage by getting him the most public attention and driving public discourse on the problems of the news media (see Pew Research Center, 2016a; Tabor & Wise, 2016). However, despite the increasing roles Twitter has played in political campaigns, little is known about how candidates promote their issue agendas (i.e., issues they attempt to draw public and media attention to) on Twitter and what the implications are.

The present study aims to contribute to the political campaign and agenda setting literature by examining major-party presidential candidates' Twitter issue agendas and Twitter users' reactions in the context of the 2016 U.S. election. First, by content-analyzing tweets of then U.S. presidential nominees, Donald Trump and Hillary Clinton, posted during the last three months of the campaign until a week before Election Day (Aug 1–Oct 31, 2016; $N = 1575$; 1024 for Clinton, 551 for Trump), we examined if the issues they emphasized on Twitter reflected each party's issue ownership and the issue agendas highlighted on their campaign websites. We also investigated the prevalence of attack tweets during the final stage of the campaign. Next, with a series of regression analyses, we examined if attack tweets attracted significantly more retweets and favorites. Finally, we tested if issues each candidate emphasized received significantly more retweets and favorites, which would suggest public agenda setting possibilities through Twitter. The results will shed light on how President Donald Trump used Twitter during his campaign and what effects it might have had.

## 2. Literature review

### 2.1. Agenda setting and agenda building

McCombs and Shaw's (1972) initial agenda setting theory revolves around the transfer of the media agenda to the public agenda and its contingent conditions (McCombs & Shaw, 1972; Weaver, Graber, McCombs, & Eyal, 1981). It posits that the media tells people what to think about by heavily reporting on several issues that the media think are important. The corresponding object salience between the media and the public became an important evidence of the media effect in the 1970s. The theory implies that only the media can set the public agenda.

Agenda building research appeared as a natural expansion of the original agenda setting research, and focused on the process by which the media agenda or policy agenda were engendered (i.e., how and why certain objects or attributes are selected and emphasized by journalists or policy makers). The theory assumes that while the media set the agenda, political actors, such as governments, political organizations, and activist groups, can influence the media to set the agenda in a way they want, which is a process called agenda-building. Political actors are keen on utilizing the effect of information subsidies they provide journalists with, which includes press releases (Kiousis, Laskin, & Kim, 2011; Kiousis, Mtirook, Wu, & Seltzer, 2006; Lieber & Golan, 2011), video news releases (Harmon & White, 2001), and political advertisements (Holbert, Benoit, & Hansen, 2002; Roberts & McCombs, 1994). By offering such information subsidies, they attempt "to intentionally shape the news agenda by reducing journalists' costs of gathering information" (Berkowitz & Adams, 1990). Studies have found the agenda building effects of information subsidies. Politicians' press releases often appear verbatim in news coverage, and video news releases are used in various TV news programs, influencing story leads, salient issues, and organizational points of view (Kaid, 1976; Kiousis et al., 2011; Kiousis et al., 2006; Ohl, Pincus, Rimmer, & Harrison, 1995).

### 2.2. Campaign websites and Twitter as agenda setting tools

With the rise of digital and social media in the past few decades, political actors have gained new tools to influence the public agenda – directly or indirectly – such as official campaign websites and social media platforms (Kiousis, Kim, McDevit, & Ostrowski, 2009; Lassen & Brown, 2011; Pew Research Center, 2016b). Most campaign websites contain candidates' short biographies and their stances on several key issues, along with constantly updated campaign news. Unlike older agenda building tools such as media interview or TV ads, campaign websites enable candidates to have almost exclusive control over content with almost no time or cost restrictions while giving voters ubiquitous access to the content. On top of these advantages, social media platforms allow direct, instantaneous, and reciprocal communication with voters (Enli & Skogerbø, 2013; Lasson & Brown, 2011). Candidates' social media messages can be immediately distributed to a wide variety of voters, inviting them to personally respond to the candidates (Kreiss, 2016). In theory, it is possible that candidates set the public agenda through social media even without successful media agenda building. Kellyanne Conway, Donald Trump's senior aide during the campaign, said in an interview that Trump "saw an opportunity to communicate right to people by cutting through the noise or the silence through the social media platforms" (Gurdus, 2016), which implied his public agenda setting effort.

Political candidates also hope their tweets will guide the news media to feature them and the issues they raise prominently or to

incorporate their points of view in news coverage (Parmelee, 2014). In other words, they want to build the media agenda through their Twitter activities. Journalists increasingly rely on digital media with downsizing newsrooms (Kiousis et al., 2009), and it raises the agenda building role of social media. It is now assumed that political journalists must cover what is happening on social media as a way to "increase transparency and accountability of the campaigns" and to "take the pulse of the electorate" (Illuminating, 2016). In that sense, political candidates' social media messages are adding to or, to some degree, replacing traditional information subsidies such as robocalls, press releases, speeches, and even campaign websites (Hong & Nadler, 2012; Lee & Lim,2016).

Among social media, Twitter is regarded as a particularly useful platform for political discourse (Hong, 2013; Hong & Nadler, 2012; Tumasjan, Sprenger, Sandner, & Welpe, 2011). Unlike Facebook which requires users to "friend" each other to be able to view each other's full profiles, Twitter's asymmetrical networks allow a user's profile and tweets to be read and shared by anybody. Twitter's simple format with a limited length of 140 characters enables quick publishing of short messages, while its personal and interactive features attract voters in a way that traditional communication tools no longer can (Kapko, 2016; Kim, Atkins, & Lin, 2016; Lee & Oh, 2012). These characteristics that combine benefits of broadcast media and face-to-face communication (Marwick, 2011) make Twitter an effective political communication tool that almost every major American politician uses (Hong, 2013).

Tweets that generated buzz are usually quoted fully by the news media without being paraphrased, which gives candidates free publicity. Candidates who had successful campaigns on Twitter had a tendency to be successful in elections (DiGrazia et al., 2013; Hong, 2013; Kruikemeier, 2014; Tumasjan et al., 2011; Williams & Gulati, 2008). These findings hint the possible effects of political tweets on the public and the media. Thus, today's presidential candidates are expected to use Twitter, in addition to websites, to influence the public and the media agenda. Recent research has found that candidates' tweets are playing a similar role to that of campaign websites, in terms of promoting political candidates' issue agendas (Lee & Lim, 2016). Then, candidates are likely to raise issues they deem important on both campaign platforms, which raises the following hypotheses.

**H1.** Issues that are emphasized on candidates' campaign websites are emphasized in their tweets.

### 2.3. Issue ownership theory

Petrocik's (1996) issue ownership theory posits that political parties have issues they are perceived to be best at handling – or issues they "own" – and that political campaigns are contests of candidates attempting to raise the salience of issues their party owns while downplaying issues the opposing party owns. According to the theory, public attention to a party's owned issue is strongly correlated with the party's electoral gain. Therefore, the success of a campaign hinges on the ability to make issues owned by its party salient in voters' minds – more salient than the issues for which the other party holds an advantage (Petrocik, 1996; Petrocik, Benoit, & Hansen, 2003; Thesen, Green-Pedersen & Mortensen, 2017). Conway and colleagues (2015) found that politicians can benefit greatly from tweeting their owned issues.

In the U.S., it is commonly believed that the Republican Party owns national defense, crime (law and order), and budgetary issues (government spending, taxing), and the Democratic Party owns the issues of civil rights, women's rights, education, environment, and social welfare. Most Republican candidates emphasize Republican issues, while most Democratic candidates highlight Democratic issues to utilize their perceived expertise in dealing with the issues. By making owned issues headline in the news, a candidate can gain an advantage in an election. For example, George H. W. Bush's Revolving Door ad of 1988 made Dukakis' perceived lenient policy toward criminals salient in voters' minds, which benefitted the Republican Party that was perceived to be tough on crime. Considering these, presidential candidates from major parties are likely to attempt to raise attention to their owned issues by frequently tweeting about them.

**H2.** Through tweets, candidates emphasize issues owned by their parties.

### 2.4. Retweets and favorites as public responses

When Twitter users want to share someone else's tweet with their own followers, they retweet it by simply clicking the retweet button. Retweeting is a key mechanism for message diffusion on Twitter. It is a fast and interactive way to spread information (Boyd, Golder, & Lotan, 2010; Jansen, Zhang, Sobel, & Chowdury, 2009; Suh, Hong, Pirolli, & Chi, 2010). Retweets are mainly used to share interesting or likable content with others and to comment on others' tweets (Wang et al., 2016), although sometimes people retweet messages for criticism purposes. Research has found that the act of sharing on social media sites often reflects the user's motivation to persuade others by spreading words, and that those with strong partisanship are more likely to redistribute the content they think is worth sharing (Lee & Song, 2017). Retweets and favorites have gained scholarly attention as indicators of the public attention that drives electronic world-of-mouth (e.g., Kim, Sung, & Kang, 2014; Xie, Hoang, Zhu, & Lim, 2013).

Between September and October 2016, the number of aggregated tweets sent out per day (including retweets) related to the U.S. presidential election ranged between 300,000 and 600,000 (Magdy & Darwish, 2016). Many of them were about Donald Trump and Hillary Clinton including retweets of the candidates' tweets. These two candidates have been active on Twitter since they declared their runs for presidency, gaining more than 10 million followers. As of November 5, 2016, Trump and Clinton had 12,938,051 and 10,171,746 followers, respectively, and four of their tweets (two for each) were retweeted more than 100,000 times.

During the presidential race, journalists had closely followed their tweets and covered their online spats as "Twitter wars" or "Twitter battles" (Fortune, 2016; FoxNews, 2016; Swanson, 2016; Watercutter, 2016). As the race was neck and neck, their Twitter battles attracted heated public attention and discussion. This may have motivated voters to actively participate in the Twitter battles

to show their support or opposition towards candidates and to influence other voters. Supporters are likely to respond more enthusiastically to issues candidates looked passionate about while critics are also likely to react strongly to the core issues to dispute the candidate's policies or arguments. Retweets and favorites are two major tools to show such reactions. Thus, the following hypothesis is posited.

**H3.** Issues emphasized by candidates are retweeted and favorited more.

### 2.5. Attack tweet

Advertisements have been political candidates' most common agenda building device for highlighting their stance or their opponents' contrasting issue positions and characteristics (Schenck-Hamlin, Procter, & Rumsey, 2000). The use of ads, especially negative attack ads, has become so common since 1980 that it is now a staple in competitive campaigns (Shen, 2004; Wattenberg & Brians, 1999). With attack ads, candidates aim to convert votes by drawing attention to an issue they have credibility in handling but upon which the opponent is weak (Wattenberg & Brians, 1999). Ads that accentuate the opponent's unfavorable character qualities are effective in making the qualities salient in voters' minds and serving as a filter in the moment of candidate evaluation, particularly for those with low levels of political knowledge (Cappella & Jamieson, 1997; Iyengar & Kinder, 1987; Nelson, Clawson, & Oxley, 1997). Research has found attack ads that are perceived as truthful elicit favorable voter reactions to the sponsor and more unfavorable reactions towards the opponent (Garramone, 1984), at a greater degree than positive ads do (Garramone, Atkin, Pinkleton, & Cole, 1990). In addition, news media tend to cover negative content more extensively than positive content, as it is traditionally deemed more valuable as an attention grabber ("If it bleeds, it leads").

While increased polarization in politics tends to make political communication more negative (Geer, 2008), the past 40 years have shown increasing polarization. The Republican Party and the Democratic Party have more divided issue positions than any point in the past 25 years (Pew Research Center, 2016c) and partisans disliked one another more than they did a generation ago (Shaw, 2012). The 2016 presidential race was also very close (Mansbridge, 2016), which could bring even more negativity to the campaign. Trump was known for his controversial attack tweets during the campaign. The New York Times (2016) even published a two-page spread titled "All the people, places and things Donald Trump has insulted on Twitter since declaring his candidacy for the presidency" with a long list of names. Clinton's most popular tweet so far was also an attack on Trump – "Delete your account." As of November 5, 2016, it was retweeted more than 556,700 times since it was posted on June 9, 2016, and it became the most-retweeted tweet of the entire election. Trump's quick comeback to it – "How long did it take your staff of 823 people to think that up – and where are your 33,000 emails that you deleted? – was retweeted more than 167,000 times, and this was his all-time most-retweeted tweet.

Twitter is a good platform to examine which type of messages becomes dominant when there is no time or space limit or the news media's intervention. It is important to know whether the major party candidates utilize this agenda setting and building tool mostly for positive messages such as self-promotion, or for negative messages like attacks on their opponents. Because candidates can send out as many tweets as they desire, it is possible that they focus on promoting their various strengths and mobilizing supporters. On the other hand, candidates might focus more on priming voters with their opponent's flaws by repeatedly tweeting about them. It is worth testing if attack tweets attract more enthusiastic responses from the public on Twitter. If attack ads elicit more favorable voter reaction (Garramone et al., 1990), attack tweets might also elicit more favorites and retweets on Twitter. Thus, the following research questions are raised.

**RQ1.** How common are attack tweets in candidates' campaign tweets?

**RQ2.** Do attack tweets receive significantly more retweets and favorites?

### 2.6. Additional features

The last research question is about Trump and Clinton's uses of other features of Twitter – multimedia, hyperlinks, and hashtags – and their message originality. Twitter has become more visual in recent years (Newton, 2013). Twitter users often attempt to differentiate or expand their short messages by attaching visual images or external links. The 2016 presidential election was probably one of the most visual campaigns in the U.S. with both major candidates actively creating and publishing pictures, videos, and graphics through social media. Traditionally, Democrats are known to be more visual-savvy than Republicans, as seen in Barack Obama's campaigns in last two election campaigns. However, Trump, who was vigorous at social media communication, could be different from John McCain, Mitt Romney, or other Republicans, in terms of multimedia uses, and it could affect voter reactions.

Twitter makes it easy for users to share not only their own messages but also existing content such as news articles or videos. Trump was known to be active in sharing tweets from external sources including ordinary citizens' (Lee & Lim, 2016). It is regarded as a big advantage social media offer that candidates can interactively communicate with voters by retweeting or replying to their tweets. It is worth examining if candidates actively utilized Twitter for sharing existing content, instead of unilaterally pushing their messages out, and if it brought more enthusiastic voter responses.

Finally, we examined Trump's and Clinton's hashtag uses. During the 2016 campaign, Trump created several hashtags, such as #MakeAmericaGreatAgain, or #MAGA, and #DrainTheSwamp, which spread on Twitter and became publicly known through media reports. A study found that the use of hashtags and attached links was related to the number of retweets (Suh et al., 2010). Thus, the

last research question about Trump's and Clinton's uses of multimedia or hyperlinks, hashtag, and message originality was added.

**RQ3.** How are Trump's and Clinton's uses of multimedia, links, or hashtags, and message originality different?

## 3. Method

### 3.1. Data collection

The Twitter data were collected on October, 31, 2016, through the Twitter API by using R, an open-source data analytics engine. Specifically, we used the R library *Rfacebook* to download all original tweets posted by @RealDonaldTrump (Donald J. Trump) and @ HillaryClinton (Hillary Clinton) between August 1 and October 31, 2016. We only collected tweets sent by their accounts. Other-created messages were also included in the sample if they were modified by the candidates before sharing. The total number of sampled tweets was 1575 (551 for Trump; 1024 for Clinton). The downloaded data included several metrics such as date posted and the number of retweets and favorites. Candidates' issue agendas were collected from the 'Issues' page of their respective campaign websites (www.donaldjtrump.com/issues and www.hillaryclinton.com/issues).

### 3.2. Measures

Content analysis was conducted by two trained coders. Each tweet served as the unit of analysis.

#### 3.2.1. Attack tweets
Whenever a tweet included criticism of unfavorable qualities, policies, behaviors, or any flaws of the other candidates, it was dummy-coded and given 1 in this category, while a benign tweet got 0. Not only attacks on the opponent, but also attacks on the opposing party, the current government, other politicians, or the media were all included. A tweet criticizing multiple targets was also coded as 1 in the category. Retweets of others' attack tweets were also counted in the same way as the candidates' own messages. Krippendorff's alpha: 0.90.

#### 3.2.2. Issues
A coding scheme of 24 issue categories was developed based on previous research, the National American Election Studies' survey items, and current affair issues that were frequently raised by candidates during the 2016 U.S. presidential campaign (i.e., economy, defense/terrorism, crime, education, foreign policy, healthcare, immigration, gun rights/control, environment, government spending/deficit, poverty, racial equality/police brutality, women's rights (abortion, income gap), LGBT rights, veterans, energy, nuclear weapons, traditional values/morals, disease, seniors/social security, media bias, inequality between the classes, problems with Washington/government, the opponent's corruption/dishonesty, the opponent's temperament). Although "problems of the opponent" were not traditionally treated as independent social issues, we included this because Trump unceasingly criticized Clinton's dishonesty over her private email server while Clinton repeatedly made an issue out of Trump's unpredictable and aggressive temperament that she argued to be unfit for a president. When a tweet touched on multiple issues, each of the issue categories scored 1 while 0 was entered into the other categories. For tweets attached with a picture, video, audio, or a link to another webpage, the attachment's content was also considered part of the message. Based on 10% of the Twitter data, the inter-coder reliability was established using Krippendorff's alpha: 0.94 for websites; 0.88 (issues) for Twitter.

#### 3.2.3. Time
Older tweets might gain more retweets and favorites because they had more time to be widely distributed and shared on Twitter. To control such time effects, tweets were grouped based on the week they were posted. Tweets posted during the first 7 days of sampling were given 1 for this category, with the number ascending each week.

#### 3.2.4. Hashtags
We dummy-coded whether a tweet included a hashtag or not. A tweet with one or more hashtags was given 1, and a tweet with no hashtag was given 0.

#### 3.2.5. Message originality
Whether a tweet's content was mostly original or not was dummy-coded. When a tweet was created mainly to share someone else's voice with little original contribution (e.g., citing a part of the news or retweeting other politicians' or citizens' endorsing tweets), it was given 0 in this category. All other tweets received 1.

#### 3.2.6. Multimedia or links
The use of attachments in a tweet was coded into one of the following categories: pictures, graphics (maps or infographics), audio (podcasting), video, visual texts (e.g., text over an image to emphasize the text – usually memorable quotes), link to the news or other web pages, or links to a page related to the candidate's campaign (his or her own website, another social media page, or voting-related sites, such as vote.gov or Iwillvote.com).

### 3.3. Analysis

To test the effects of issue tweets and attack tweets, we ran a set of OLS regressions predicting favorites and retweets – separately for both candidates. First, posted time (1–14), message originality (0–1), and the use of hashtags (0–1) were entered as control variables. Then, attack tweets (0–1), and each candidate's top 10 issues were entered as independent variables.

## 4. Results

### 4.1. Issues: campaign websites

Trump's campaign website highlighted 18 issues with 18 short videos in which he explained his opinion on each issue. The first issue, "the Establishment," was treated as the most important of all, with its thumbnail size four times larger than other videos. In a short description of the issue underneath the thumbnail, he presented himself as an outsider who was being cornered by the Establishment: "I want to win for the people of this great country. The only people I will owe are the voters. The media, special interest, and lobbyists are all trying to stop me. We won't let that happen!" In "Competent leadership," he lashed out at established politicians again: "Politicians can talk but they don't get things done…" Other issues included: "Trade war," "Making deals with Congress," "Law enforcement respect," "What I would do on the first day in office," "Drug epidemic," "Live free or die," "The 2nd Amendment," "Political correctness," "Self funding," "Illegal immigration," "Unifying the nation," "Education," "The military," "Jobs," "Life changing experiences," and "The economy". His issue positions were largely aligned with those of the Republican Party. However, the way he titled and organized the issues was neither conventional nor sophisticated, which showed that the selected issues were his own, rather than his party's. For instance, he openly opposed political correctness saying it "takes too much time." Some categories (e.g., "What I would do on the first day in office" and "Live free or die") covered multiple issues that were already listed on the same page. His first-person language was colloquial rather than professional, often followed by one or two exclamation points (e.g., "I will make our Military so big, powerful and strong that no one will mess with us." and "I won't let them take away our guns!!"). His statements were short and strong (e.g., "Our country is getting ripped off," "Live free or die: a motto for the whole country to follow," and "If we don't have borders, we don't have a country."), and rarely followed by supporting arguments or detailed plans. There was not much content on the page and it did not seem it would require much time for ordinary people to read the whole page.

In contrast, Clinton's issue page looked excessive with extraordinarily detailed information. Under 6 categories, there were 41 issues displayed in alphabetical order, which made it hard to know her top priorities. "The economy and jobs" category had the most issues (20), including "A fair tax system," "An economy that works for everyone," "Jobs and wage," "Poverty," and "Veterans." "Justice and equality" had 16 issues, including gun violence prevention, immigration reform, LGBT rights, racial justice, and women's rights. Other categories were health (12 issues), education (9), national security (5), and environment (4). Some issues belonged to multiple categories. Each issue opened up another page full of multimedia and long text that was devoted to the issue. The details were formally written in the third person (e.g., "Hillary Clinton believes that we need an economy that works for everyone, not just those at the top…. Hillary is committed to restoring basic fairness in our tax code… As president, Hillary will: (continued with bullet points)"). Clinton's issue page seems to be the result of extensive research and planning, but because of the amount of information, it seemed difficult to expect ordinary citizens to read the entire page and understand the content.

### 4.2. Issues: Twitter

Content analysis of Trump's and Clinton's tweets demonstrated that both candidates utilized Twitter to promote their issue agendas. However, there were big differences in the kind of issues they emphasized (see Table 1). There were only two issue categories that were on both candidates' lists of top 7 issues. The one that commonly topped their lists was the opponent's problems.

**Table 1**
The frequency of issues raised in each candidate's tweets.

| Trump 310 out of 551 tweets mention one or more issues (56.3%) | | | Clinton 641 out of 1024 tweets mention one or more issues (62.6%) | | |
|---|---|---|---|---|---|
| Rank | Issue Category | N (percent) | Rank | Issue Category | N (%) |
| 1 | The opponent's problems | 102(18.5%) | 1 | The opponent's problems | 95 (9.3%) |
| 2 | Gov/Establishment | 55 (10.0%) | 2 | Women's issues | 88 (8.6%) |
| 3 | Media bias | 49 (8.9%) | 3 | Racial/religious issues | 86 (8.4%) |
| 4 | National security | 39 (7.1%) | 4 | Inequality/middle class | 78 (7.6%) |
| 5 | Economy/Jobs | 33 (6.0%) | 5 | Economy/Jobs | 75 (7.3%) |
| 6 | Health care/Obamacare | 25 (4.5%) | 6 | Military/Veterans | 57 (5.6%) |
| 7 | Foreign policy | 20 (3.6%) | 7 | Education/Kids | 56 (5.5%) |
| 8 | Immigration | 12 (2.2%) | 8 | National security | 53 (5.2%) |
| 9 | Crime | 11 (2.0%) | 9 | Inclusion | 50 (4.9%) |
| 10 | Gun issues | 8 (1.5%) | 10 | Foreign policy | 47 (4.6%) |
| All | Issues (multiple selections) | **390** (70.8%) | All | Issues (multiple selections) | **895** (87.4%) |

Both Trump and Clinton devoted the most number of tweets to criticizing each other's character or personality, such as dishonesty. The percentage of the category in all sampled tweets was twice as high as in Trump's (18.5%) tweets as in Clinton's (9.3%). Almost one-third of Trump's issue tweets (310 tweets that discussed one or more issues) were devoted to accusing Clinton of corruption and dishonesty over her activities as the Secretary of State, including her management of a private email server. While raising an issue of Trump's improper past behaviors, Clinton focused more on Trump's easily-angered temperament that she argued made him unfit to be president. The second category that commonly appeared in both candidates' issue agendas was the economy, which ranked fifth in both lists. The other top six issues that two candidates stressed were vastly different.

Trump's Twitter issue agenda demonstrated that, as a challenger, he mainly focused on criticizing the elites in power. His second most popular issue category was the overall problems with the Establishment. In that category, he criticized the government and its officials as "the swamp" to drain. He also pointed out the media, the Obama administration's handling of national security, and foreign policies, and Obamacare as the major areas he would like to change. These issues overlapped with the issues highlighted on his website. Some issues listed on the website, such as his opposition to political correctness, were also shown in his tweets (e.g., "So many 'politically correct' fools in our country. We have to all get back to work and stop wasting time and energy on nonsense!"). Overall, Trump's issue agenda was in line with his party's as it concentrated on the government's national security and foreign policies rather than so-called Democratic issues, such as education, environment, or women's right. However, as a Washington outsider, his goal seemed to be publicly criticizing the Establishment, regardless of party affiliation. He not only attacked the government and then President Obama (e.g., "REAL change means restoring honesty to the govt. Our plan will END govt. corruption!", "President Obama will go down as perhaps the worst president in the history of the United States!"), but also expressed utter disdain for other established Republican colleagues who criticized him during the campaign (e.g., "Our very weak and ineffective leader, Paul Ryan, had a bad conference call where his members went wild at his disloyalty.", "The very foul mouthed Sen. John McCain begged for my support during his primary (I gave, he won), then dropped me over locker room remarks!", and "I was never a fan of Colin Powell after his weak understanding of weapons of mass destruction in Iraq = disaster. We can do much better!"). This shows his deviation from typical campaign strategies as a Republican Party nominee. He also proclaimed the media as one of his opponents in the election (e.g., "I am not just running against Crooked Hillary Clinton, I am running against the very dishonest and totally biased media – but I will win!"), and he strongly criticized the media. Although many Republicans have complained about the media's "liberal bias," Trump's outright assaults of the media were beyond normal and unwarranted (e.g., "Election is being rigged by the media, in a coordinated effort with the Clinton campaign, by putting stories that never happened into news!" and "CNN is the worst – fortunately they have bad ratings because everyone knows they are biased"). Mainstream news media's negative reports about him were usually confronted with his strong counter attack tweets.

Meanwhile, Clinton, who had worked in the Obama administration as part of the Establishment and was endorsed by most major news organizations, seemed to have little need to be critical towards them. Besides criticizing Trump, she mainly focused on where her strengths were as the female presidential candidate nominated by the Democratic Party: women's rights, racial or religious equality, inequality between the classes, military or veterans, and education or kids. Most of these were the Democratic Party-owned issues, and they were consistently emphasized on both her website and Twitter. These results showed that the candidates both brought up different issues to be considered and discussed by voters.

The first two hypotheses predicted that the candidates would emphasize the same issues they highlighted on their campaign websites (H1) and issues owned by their parties (H2). H1 was supported for both candidates. H2 was also mostly supported for both, but Trump's harsh attacks on his fellow Republicans and the media showed a distinction.

*4.3. Message type: attack tweets*

The test results of RQ1 revealed that both Trump and Clinton devoted half of their total tweets (53.9% for Trump, 48.7% for Clinton) to attacking someone or some group during the final three months of the campaign. While Trump leveled indiscriminate accusations against multiple targets including Clinton, Obama, other politicians, and the media, Clinton's target was dominantly Trump and Pence. In the final days of the campaign, she condemned FBI director James Comey for his public announcement that his agency was reexamining Clinton's email investigation.

*4.4. Hashtags*

The hashtag feature was heavily employed by Trump. He used one or more hashtags in 42.5% (234) of his total tweets during the last three months of the campaign. His hashtags often targeted Clinton and the Obama administration (e.g., #CrookedHillary #PaytoPlay #DrainTheSwamp #BigLeagueTruth #ObamacareFailed) while emphasizing that he would #MakeAmericaGreatAgain (or MAGA). Trump's hashtags gained attention from both the media and the public. Clinton used a hashtag only in 14.9% (153) of her tweets, which was almost a third of Trump's. Her most popularly used tweet was #DebateNight, which she utilized on presidential or vice presidential debate days. While Trump's hashtags were another way of expressing his opinion, Clinton's hashtags were more like keywords for the Internet search.

*4.5. Message originality*

For both candidates, 8 out of 10 tweets (T 84.0%, C 84.2%) were original messages created by the candidate themselves or their campaign teams. Messages that quoted another source were less than 16%.

### 4.6. Predictors of voter reactions

For RQ2 and H3, candidates' retweet and favorite counts were examined in relation to the issue and the message type. During the sampled 92 days, Trump received 6,174,557 retweets and 15,149,194 favorites for his 551 tweets. Clinton received 3,885,947 retweets and 8,772,693 favorites for her 1024 tweets. In average, Trump's tweet received 11,206 retweets and 27,494 favorites, which are three times as many as Clinton's average retweets (3795) and favorites (8567). Favorites and retweets were highly correlated with each other for both candidates (T 0.89, C 0.93.).

A pair of OLS regression analyses was conducted to examine if attack messages (RQ2) and main issues on their agendas (H3) received significantly more voter reactions. First, the results showed that attack tweets were an effective way to attract voter reactions for Trump ($b = 2921.1$, $p = 0.035$ for favorites, $b = 2213.2$, $p < 0.001$ for retweets). Attack tweets were also a significant predictor of Clinton's favorites ($b = 1638$, $p = 0.035$) and retweets ($b = 1593.5$, $p < 0.001$).

H3 hypothesized that the top issues on the candidates' agendas raised the favorite and retweet counts (H3). We found that, among Trump's top 7 issues categories, media bias attracted such reactions most effectively. Whenever he discussed the media or journalists' problems, the tweet gained significantly more favorites ($b = 6850$, $p = 0.001$) and retweets ($b = 2860$, $p < 0.001$). Another effective issue was the opponent's problem; his tweet criticizing Clinton's character or quality was retweeted significantly more ($b = 2966.2$, $p < 0.001$). Other issues were not significant except for the economy, which was a negative predictor of favorites ($b = -5119.5$, $p = 0.034$). This means that tweets where he raised the issue of the economy gained significantly less favorites. However, as some of the issues Trump emphasized most strongly (i.e., the media's and Clinton's problems) attracted significantly more retweets and favorites, we could say that H3 was supported. Among control variables, time, originality, and hashtag usage were all significant predictors of retweets. For example, Trump's post was retweeted significantly more if it was created near the Election Day ($b = 256.6$, $p < 0.001$ from his own originality ($b = 3717.2$, $p < 0.001$). However, when he used a hashtag, the tweet received significantly less retweets ($b = -2122.5$, $p < 0.001$). The estimated models explained 17.4% (favorites) and 25.8% (retweets) of variance.

On the other hand, none of Clinton's top 7 issues, including her opponent's problems, were effective in attracting more voter reactions. Among the issues, income inequality was a negative predictor of both favorites ($b = -3335.6$, $p = 0.016$) and retweets ($b = -1752.2$, $p = 0.019$), which means that when she discussed the issue of inequality between social classes on Twitter, the tweet had the tendency to receive significantly less favorites and retweets. The economy also negatively predicted favorites ($b = -2926.1$, $p = 0.039$), and it was a marginally significant negative predictor of retweets ($b = -1292.8$, $p = 0.092$). Only the category of women's rights hinted a positive relationship with retweets, but it was marginally significant ($b = 1189.1$, $p = 0.088$). Thus, H3 was not supported for Clinton. Among the controls, only hashtags positively and significantly predicted both favorites ($b = 9415.4$, $p < 0.001$) and retweets ($b = 5012.1$, $p < 0.001$). While Clinton's tweets with hashtags had the tendency to be favorited and retweeted more, hashtags were a negative predictor for Trump. Time and originality were not significant. These models explained 10.6% (favorites) and 11.3% (retweets) of variance, respectively.

### 4.7. Language

An ad-hoc analysis of the candidates' 10 most-retweeted and favorited tweets revealed another interesting difference in their language uses (see Tables 2 and 3). Most of Trump's top 10 tweets were blunt and direct attacks on several targets (i.e., Clinton, Paul Ryan, Obama, the media), and he used strong words such as "crooked," "dishonest," "worst," "corrupt," and "liar." His most-retweeted message (37,134 times) during the three months was "Get rich quick! Crooked Hillary Clinton's pay to play guide." He posted this along with an animated video alleging that she used her Secretary of State position for her family foundation to receive "loads of money from foreign countries and donors." His compliment on Mike Pence after the first vice-presidential debate was the only tweet that made the top 10 list (#4 in retweet; #1 in favorite) without attacking anyone. Seven tweets in the top 10 list were text only. Many of the top 10 most retweeted tweets were also most favorited tweets.

In contrast, Clinton's most-retweeted messages were much more subtle and nuanced. While 7 out of her top 10 tweets targeted Trump or other Republicans, she had the tendency to simply repeat what Trump said without explicitly pointing out why the remark or behavior was a problem. For example, instead of voicing her opinion, she described Trump's tweet: "Donald Trump called her 'Miss Piggy' and "Miss Housekeeping." [one blank line] Her name is Alicia Machado. #DebateNight." Similar to a poem, her tweet often had an ellipsis and condensed phrase. In her most shared tweet, she simply stated: ""I never said that." Donald Trump, who said that. #debatenight," retweeting Trump's tweet that argued the concept of global warming was created by and for the Chinese. She often replaced text with visuals or hashtags to deliver her main idea. Seven out of the top 10 tweets were followed by a picture or a video. Sometimes, she only entered a hashtag (i.e., #DebateNight) with a picture. Compared to Trump's clear and straightforward language, Clinton's language was more implied and layered, often requiring background information, interpretation, or consumption of attached visuals.

### 4.8. Multimedia and links

There were noticeable differences in the two candidates' uses of multimedia as well (see Table 4). Among the coded multimedia and hyperlink variables, what Trump used most frequently was a hyperlink (besides links to a campaign site or voting site). In his total 511 tweets, 1 in 5 (114; 20.7%) had a link to a webpage – usually to a blog or a news article. The next popular attachment in his tweets was visualized texts, which he used in 17.2% of his tweets to emphasize his own quotes with his picture as a background. This

**Table 2**
Trump's most-retweeted tweets.

| | Tweet | Date | RT | Fav |
|---|---|---|---|---|
| 1 | Get rich quick! Crooked Hillary Clinton's pay to play guide:<br>+ *animated video about Clinton* | 10/17 | 37134 | 59156 |
| 2 | Hillary said she was under sniper fire (while surrounded by USSS.) Turned out to be a total lie. She is not fit to lead our country.<br>+ *Clinton's speech video with text #DrainTheSwamp and #CrookedHillary on top* | 10/26 | 36738 | 68601 |
| 3 | Mike Pence won big. We should all be proud of Mike! | 10/5 | 36698 | 122794 |
| 4 | Wow, Twitter, Google and Facebook are burying the FBI criminal investigation of Clinton. Very dishonest media! | 10/30 | 33786 | 68324 |
| 5 | Nothing on emails. Nothing on the corrupt Clinton Foundation. And nothing on #Benghazi. #Debates2016 #debatenight | 9/27 | 31840 | 60301 |
| 6 | History lesson: There's a big difference between Hillary Clinton and Abraham Lincoln. For one, his nickname is Honest Abe. #RattledHillary<br>+*picture of Clinton and Lincoln with text Liar and Honest on top* | 10/10 | 30969 | 68471 |
| 7 | Paul Ryan should spend more time on balancing the budget, jobs and illegal immigration and not waste his time on fighting Republican nominee | 10/10 | 30857 | 83282 |
| 8 | Wow, @CNN Town Hall questions were given to Crooked Hillary Clinton in advance of big debates against Bernie Sanders. Hillary & CNN FRAUD! | 10/11 | 30027 | 62623 |
| 9 | President Obama will go down as perhaps the worst president in the history of the United States! | 8/2 | 29933 | 80437 |
| 10 | Wow, @CNN got caught fixing their "focus group" in order to make Crooked Hillary look better. Really pathetic and totally dishonest! | 10/10 | 29605 | 71892 |

**Table 3**
Clinton's most-retweeted tweets.

| | Tweet | Date | RT | Fav |
|---|---|---|---|---|
| 1 | "I never said that." Donald Trump, who said that. #debatenight<br>+*Trump's tweet: 'The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.'* | 9/27 | 100170 | 158597 |
| 2 | RT this if you're proud to be standing with Hillary tonight. #debatenight<br>+*Picture of Clinton with text on top: I'm with her.* | 9/27 | 82969 | 94765 |
| 3 | Donald Trump called her "Miss Piggy" and "Miss Housekeeping."<br><br>Her name is Alicia Machado. #DebateNight<br>+*Machado's interview video* | 9/27 | 65193 | 87126 |
| 4 | "Trump just criticized me for preparing for this debate. You know what else I prepared for? Being president." #DebateNight | 9/27 | 53208 | 110718 |
| 5 | Where was this kind of comedy last night?<br>+ *Trump's tweet: "The results are in on the final debate and it is almost unanimous, I WON! Thank you, these are very exciting times."* | 10/21 | 51786 | 136077 |
| 6 | A man who can be provoked by a tweet should not have his hands anywhere near the nuclear codes. #DebateNight | 9/27 | 47368 | 90421 |
| 7 | With just 10 days to go, Republicans are pulling out all the stops to try to bring Hillary down. RT this to help get out the facts:<br>+*picture of long text: What you need to know about Clinton's emails…* | 10/30 | 42065 | 40766 |
| 8 | #DebateNight<br>+*picture of CNN/ORC poll: Clinton wins debate 62% vs 27%* | 9/27 | 37429 | 78167 |
| 9 | "I will be a president for all of the people." – Donald Trump*<br>*Except women, people of color, LGBT people, Muslims… #Debate | 10/10 | 34400 | 58405 |
| 10 | Every minute of Michelle Obama's 30 min speech today is worth watching.<br>+ *Michelle Obama's speech video* | 10/13 | 31671 | 65101 |

**Table 4**
The frequency of multimedia or link attachments for each candidate.

| Trump | | | Clinton | | |
|---|---|---|---|---|---|
| | Types | N (percent) | | Types | N (percent) |
| 1 | Links to a non-campaign website | 114 (20.7%) | 1 | Links to a campaign website | 278 (27.1%) |
| 2 | Visualized texts | 95 (17.2%) | 2 | Videos | 207 (20.2%) |
| 3 | Videos | 81 (14.7%) | 3 | Visualized texts | 131 (12.8%) |
| 4 | Links to a campaign website | 42 (7.6%) | 4 | Links to a non-campaign website | 91 (8.9%) |
| 5 | Pictures | 38 (6.9%) | 5 | Pictures | 81 (7.9%) |
| 6 | Graphics | 3 (0.5%) | 6 | Graphics | 21 (2.1%) |
| 7 | Audios | 0 (0%) | 7 | Audios | 6 (0.6%) |

is followed by videos (14.7%), links to his campaign website (7.6%), and pictures (6.9%). There were only 3 graphics (0.5%) and no audio-only files attached to his tweet. Altogether, 67.7% of his tweets had one or more attached media or links.

For Clinton, the most common one was links to campaign-related sites; more than a quarter of her total tweets (27.1%) had a link. As Twitter limits the length of a message, she often tried to lead Twitter users to her own website where she explained her policies in

**Table 5**

Regression model predicting favorites and retweets (visual elements included).

| | Trump | | | | Clinton | | | |
|---|---|---|---|---|---|---|---|---|
| | Favorite | | Retweet | | Favorite | | Retweet | |
| | b | SE | b | SE | b | SE | b | SE |
| Controls: | | | | | | | | |
| Time | 272.1[*] | 1924.9 | 267.6[***] | 57.4 | 1.6 | 101.7 | 9.5 | 55.3 |
| Originality | 8306[***] | 1505.6 | 3303.3[***] | 635.5 | 564.2 | 1013.2 | 372.7 | 551.4 |
| Hashtag | −6002.7[***] | 1165.5 | −2281.4[***] | 491.9 | 8944.9[***] | 1030.0 | 4736.7[***] | 560.5 |
| Message Type: | | | | | | | | |
| Attack | 1616.2 | 1335.0 | 1997.8[***] | 563.5 | 1524.8[*] | 774.2 | 1538[***] | 421.3 |
| Issues: | | | | | | | | |
| #1 | 3263.8[*] | 1590.7 | 3421.8[***] | 671.4 | −1251.5 | 1291.8 | −398.1 | 702.9 |
| #2 | −311.1 | 1836.8 | 662.1 | 775.2 | 1392.2 | 1261.2 | 1038.7 | 686.3 |
| #3 | 5588.5[**] | 1987.2 | 2620.6[**] | 838.8 | −595.0 | 1273.3 | −149.7 | 692.9 |
| #4 | −1130.4 | 2087.3 | −211.2 | 881[*] | −2974.3 | 1352.6 | −1523.5[*] | 736 |
| #5 | −4923.3[*] | 2259.7 | −1625.3[#] | 953.7 | −2248.1 | 1388.4 | −955.4 | 755.5 |
| #6 | −1606.5 | 2723.8 | 243.1 | 1149.6 | −2079.6 | 1530.2 | −936.9 | 832.7 |
| #7 | −1643.7 | 3197.8 | −471.6 | 1349.6 | −1794.9 | 1559.3 | −816.3 | 848.5 |
| Visual elements: | | | | | | | | |
| Picture | −3229.8 | 2172.6 | −454 | 917 | 5251.2[***] | 1378.8 | 1670.7[*] | 750.3 |
| Graphic | −2878.9 | 7148.3 | 1238.4 | 3017.1 | −1564 | 2494.6 | −635.1 | 1357.5 |
| Video | −2908.8[#] | 1605.5 | 848.3 | 677.6 | 2329.8[*] | 936 | 1599.9[**] | 509.3 |
| Visual text | −4392.2[**] | 1513 | 14 | 638.6 | 4237.6[***] | 1093.3 | 2886.3[***] | 595 |
| Link | −10532.2[***] | 1415.3 | −2269.6[***] | 597.4 | −3083.6[*] | 1292.7 | −1335.3[#] | 703.4 |
| Link – campaign | −12488.7[***] | 2064 | −3545[***] | 871.2 | −3160.2[***] | 859 | −1019.9[*] | 467.4 |
| Model F | 12.7[***] | | 13.7[***] | | 10.3[***] | | 10.4[***] | |
| Model R² | 0.29 | | 0.30 | | 0.15 | | 0.15 | |
| Sample N | N = 551 | | N = 551 | | N = 1024 | | N = 1024 | |

[***] $p < 0.001$.

[**] $p < 0.01$.

[*] $p < 0.05$.

[#] $p < 0.10$.

detail. Videos were the second most-popular media that she attached to 1 in 5 tweets (20.2%). This is followed by visualized texts (12.8%), links to non-campaign sites (8.9%), pictures (7.9%), and graphics (2.1%). There were 6 audio-only files (0.6%). Overall, 79.6% of her tweets had a media file or a link, which was higher than that of Trump's. Interestingly, when less popular media (picture, graphic, and audio) were excluded, their top 4 ranks of attachments were in the complete opposite order; Trump's #1 was Clinton's #4, and Clinton's #4 was Trump's #1.

Because of the differences in the preferred multimedia and links between the candidates, we pursued more investigation on RQ3. An ad-hoc analysis was conducted to examine if the same media or links influenced the two candidates' favorite and retweet counts in the same way or differently. The six variables besides audio were entered into the two regression models predicting each candidate's favorite and retweet counts, in addition to existing variables (see Table 5). The results revealed a stark contrast in the multimedia effects between Trump and Clinton.

First, for Trump, none of the attachments seemed to work to his advantage. Visual texts, links to his campaign website, and links to a non-campaign website were all negative predictors of favorites. This means that a tweet that was posted with a visualized text or a link gained significantly less favorites, whether the link was connected to a campaign website or a news site. Videos were a marginally significant and a negative predictor of favorites. Links were also negative predictors of retweets. Pictures and graphics were not significant.

On the other hand, pictures, videos, and visual texts all positively and significantly predicted favorites and retweets for Clinton. Only graphics were far from being significant. However, similar to Trump's case, hyperlinks were negative predictors of favorites and retweets. Links to a non-campaign websites were marginally significant in predicting retweets.

With the multimedia variables entered, Trump's #1 issue, the opponent's problems, became significant in attracting not only retweets but also favorites ($b = 3263.8$, $p = 0.041$). Meanwhile, attack became a non-significant predictor of favorite. Besides that, media bias became marginally significant in predicting favorites ($b = 5588.5$, $p = 0.005$). In addition, time, originality, hashtags, and the economy were all significant predictors of favorites and retweets in the same way. Including the additional attachment variables, Trump's regression models explained 28.8% (favorites) and 30.3% (retweets) of variance. Clinton's new models explained 14.9% (favorites) and 15% (retweets) of variance.

## 5. Discussion & conclusions

While Twitter's agenda building function has gained scholarly attention (Conway-Silva, Filer, Kenski, & Tsetsi, 2017; Parmelee, 2014), its role for public agenda setting in political campaigns has not been widely investigated. The present study attempted to fill in the gap and test the less-explored aspects. The results of content analysis and regression analysis showed various differences between Trump's and Clinton's tweets. One commonality is that they both actively tweeted to draw public attention to the issues they wanted to emphasize. As Petrocik's issue ownership theory suggested, both candidates emphasized the issues their parties owned. Although some of Trump's tweets were not exactly aligned with the direction of the Republican Party, his overall issue agenda reflected Republican values and viewpoints. The consistency across the two digital platforms – Twitter and campaign websites – demonstrates that Twitter is increasingly playing a role as an extension of campaign websites.

It is noteworthy that half of the two presidential candidates' tweets posted during the three months had a negative tone. While Twitter is recognized to be a popular tool for self-promotion and presentation, both Trump and Clinton mainly used it as an affordable channel to deliver negative messages about their political opponents. The issue category that topped both candidates' agendas was each other's unfavorable character. In particular, animosity towards Clinton and the media was the centerpiece of Trump's campaign. Although the news media criticized his uncivil remarks and made fun of him as a "cry-bully" (Keohane, 2016), the issues he raised regarding Clinton and the media were enthusiastically received by voters. On the other hand, none of Clinton's top issues triggered such reactions. These findings indicate that at least in the so-called "Twitterverse," Trump was more successful in getting his issue agenda across to voters and lead voter engagement.

Candidates' attack tweets were effective in drawing voter reactions. It is not clear why people favored and retweeted attack messages more than positive or neutral messages. It could be related to the atmosphere of the 2016 race, which was very close until the end, or it could be the polarization and heightened hatred between the Republican voters and the Democratic voters. What we can tell is that Twitter users were more inclined to support and disseminate attack messages than others. Whether it is good or bad for society, this finding implies public agenda setting effects of attack messages, which needs to be further examined in future studies.

Attack tweets can also have agenda building effects because candidates' negative messages tend to be reported by the news media more than positive messages. In addition, like partisan blog posts, candidates' attack tweets offer heuristic cues to journalists when they describe or frame the candidates in the news (Farrell & Drezner, 2008). Those frames, in turn, can influence voters' evaluations of the candidates (Zaller, 1992). According to McCombs, (2014), while the media tell us *what to think about* (Cohen, 1963) at the first level (object agenda setting), they also tell us *how to think about* the objects at the second level (attribute agenda setting). Trump often called Clinton #CrookedHillary with some punchline hashtags, such as #PaytoPlay and #LockHerUp, and those were redistributed and reinforced through news stories that quoted his tweets. According to the second-level agenda setting effect, those tweets could lead voters to be primed with the corrupted politician image.

This study also found different functions of multimedia in the two candidates' tweets. Visual elements did not do much to Trump. His tweets were more popular when they were text-only. It might suggest different preferences of Republicans and Democrats, but it could also be related to the roles that visual elements played in their tweets. For Trump, words were his main weapon. He would tweet what came to his mind immediately – even in the middle of night – without waiting for his staff to review or prepare a picture or a video to add. People seemed to be more interested in his unpredictable off-the-cuff messages than in any attached visuals or quotes. It could be because those tweets with visuals were different from Trump's other tweets. Robinson (2016) found that all of Trump's visual tweets were sent out from an iPhone, and those were usually more positive than his tweets sent out from his Android phone. Based on that, he argued that the iPhone tweets were written by Trump's staff, not by Trump himself. If that is the case, the lack of Trump's signature aggressive style might explain the low number of responses to the visual tweets. His tweets with hashtags were also mostly from the iPhone, and lacked his blunt style. This might be the reason his tweets with hashtags were less popular.

On the other hand, multimedia and quotes were an integral part of Clinton's tweets and visual elements, such as a picture, video, or visualized text, were the most effective means to engage voters on Twitter. She often made her messages implicit, while completing the tweet with well-designed images with quotes or professionally-edited videos. While most of Trump's pictures were wide shots from recent rallies or speeches, Clinton's were often personal and emotional, such as her and her husband Bill Clinton's romantic pictures from the past, an interview with her childhood friend, or old pictures of a memorable person. Videos showed the anger of those who felt marginalized or mocked by Trump such as veterans or disabled people. It is possible that these elements affected voters emotionally.

Several limitations of this study should be noted. First, although we found evidence that candidates used Twitter to put forth their issue agendas and influence the public, we are not capable to make claims about Twitter's actual agenda building or setting effects because we did not analyze subsequent media coverage or public opinion. We can only suggest the possibilities. We encourage future studies to investigate if candidates' issue agendas actually influenced the media coverage or the public. Second, because we looked at only two candidates in a certain context, the content analysis results of their tweets may not be generalizable to other presidential candidates. Also, we collected tweets from the last three months of the campaign. As candidates' issue agendas can change with the rise and fall of certain issues over time, analyzing longitudinal data about a larger number of candidates will allow for a more accurate picture of Twitter's agenda setting dynamics.

Theoretically, this study contributes to the political campaign literature while expanding the scope of agenda setting literature and issue ownership theory. The results of this study offer insight into Twitter's potential to set the public agenda with or even without the news media's gatekeeping. Due to the heightened public attention to Twitter and the current journalism practice of using Twitter for story ideas and framing (Parmelee, 2014), the implications of this potential for the public can be significant. The associations found between Trump's issue agenda and voter responses offer indirect support for Twitter's public agenda setting and media

agenda building possibilities. Although our data were cross sectional, it is reasonable to assume that candidates' selections and emphasis of certain issues affected the favorite and retweet counts, not the other way around, because of temporal precedence. Nonetheless, we cannot say such user reactions on Twitter accurately represent the public agenda. Campaign tweets' agenda building effects should also be tested with content analysis of news coverage of the candidates. Therefore, while we suggest potential effects of Twitter, further exploration and tests with different kinds of methods are needed.

This study has practical implications for political actors, particularly political candidates, as they are keen on drawing favorable responses from voters on social media. In November 9, 2016, Donald Trump was elected to be the next president of the U.S. It was a surprise to many people because most major news media had criticized Trump's remarks, tweets, and behaviors over the course of his campaign, while endorsing Clinton and predicting her victory. Trump also continuously accused the media of being dishonest and unfair. He even tweeted after the election, "If the press would cover me accurately & honorably, I would have far less reason to 'tweet' (Dec, 2016). Thus, although even negative news coverage helped him be exposed to the public, it is hard to attribute his victory to the mainstream media's promotion effects. Rather, the election result speaks to the power of his Twitter campaign that effectively counteracted the negative framing of the media and his opponents. After the election, Kellyanne Conway said in an interview regarding Trump's 100-day plan: "(Trump is) just trying to cut through the nonsense of people telling Americans what is important to them, which we saw through the elections wasn't true. People constantly being told this issue, this statement, this past transgression is important to you – and Americans said, 'No, it's not. What's important to me is this 100-day plan.'" (Wright, 2016). As demonstrated in the statement, Trump seemed to attempt to set the public agenda himself through Twitter, rather than letting the news media set the agenda.

After the election, scholars, political strategists, and the media were busy analyzing the factors that might have affected Trump's victory. We suggest that one factor might be his successful campaign on Twitter, which effectively attracted voters to his issue agenda. He was not a typical candidate in many ways, but his unconventional campaign gained public support – both online and offline –, and made his and Republican issues, such as the media bias, huge social issues that were salient in people's minds. His victory shows that Twitter's public agenda setting effect might be stronger than people have expected. We encourage this effect to be further examined in future studies.

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