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Exploring the Relationship Between Campaign Discourse on Facebook and the Public's Comments: A Case Study of Incivility During the 2016 US Presidential Election

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Abstract

Social media is now ubiquitously used by political campaigns, but less attention has been given to public discussions that take place on candidates' free public accounts on social media. Also unclear is whether there is a relationship between campaign messaging and the tone of public comments. To address this gap, this article analyzes public comments on Facebook accounts of candidates Trump and Clinton during the US election presidential debates in 2016. We hypothesize that attack messages posted by the candidates predict uncivil reactions by the public and that the public is more likely to be uncivil when attacking candidates. We use content analysis, supervised machine learning, and text mining to analyze candidates' posts and public comments. Our results suggest that Clinton was the target of substantially more uncivil comments. Negative messages by the candidates are not associated with incivility by the public, but comments are significantly more likely to be uncivil when the public is attacking candidates. These results suggest that the public discourse around political campaigns might be less affected by what campaigns post on social media than by the public's own perceptions and feelings toward the candidates.

Introduction

Scholars have studied how campaigns have been using digital media for over two decades, with the focus shifting from the potential of the Internet to foster more interaction

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between candidates and citizens (Stromer-Galley, 2000; Xenos and Foot, 2005) to a more utilitarian use of digital technologies as strategic communication tools (Bimber, 2014; Foot and Schneider, 2006). With the rise of social networking sites in the past decade, research has focused on understanding how these platforms have been used in strategic ways by candidates to engage, energize, and mobilize voters without necessarily opening more communication channels—a strategy described by Stromer-Galley (2019) as "controlled interactivity." Yet, as campaigns rely on social media, they are more visible and can become increasingly subject to public criticism, as voters can comment on a candidate's social media account to attack them on their character or policies. Despite candidates' resistance to enabling more horizontal forms of interaction with the public, citizens are using social media to talk about the candidates, and to engage with each other and the campaigns on candidates' free social networking accounts.

Research has suggested that citizens leverage social media to reach out to political leaders and are more likely to engage with politicians who have demonstrated a willingness to respond, and also more likely to be negative toward politicians who are not responsive on social media (Tromble, 2018). From the standpoint of deliberative democracy, which values broader discussions in public spheres as means of informing and influencing political decisions (Habermas, 1996), the ability for citizens to use social media to express opinions about the elections and discuss politics is arguably desirable as it has the potential to give voice and visibility to diverse claims and may serve to inform political elites (Hendriks and Lees-Marshment, 2019). The public engages in an inherently public discussion on social media (Reagle, 2015), whether or not candidates and campaigns participate in these conversations or take them into account, and these discussions could arguably inform voters' perspectives about the candidates during the elections.

During political campaigns, candidates may adopt a negative, sometimes uncivil, tone to satisfy strategic goals (Herbst, 2010). Politicians and political actors in the age of social media are fueling what Sobieraj and Berry (2011) describe as outrage culture to provoke visceral responses from their followers, such as anger, fear, and moral indignation. In addition to using TV advertisement, live events, and debates to engage in negative campaigning and attack opponents, candidates are increasingly leveraging the affordances of social media—such as the ability to speak directly to their audience and the potential for messages to go viral—to engage in negative campaigning. Research suggests that the 2016 election was the most negative on record (Fowler et al., 2016). Donald Trump's presidential campaign made personal attacks and name-calling a common occurrence, especially on his favorite social media platform Twitter (Stromer-Galley, in press). News outlets further amplified Trump's attacks by reporting on them. The *New York Times*, for example, created a running list of "people, places, and things Donald Trump insulted on Twitter" since he declared his candidacy—a list with 280 entries during the campaign.[1] Trump's vulgar rhetoric provoked a public perception of negativity around the campaign, despite the fact that Hillary Clinton's did not engage in the same degree of animosity toward her opponents as did Trump, but her television advertising was substantially more negative than positive and more negative than Trump's—but she did not engage in the same degree of animosity (Fowler et al., 2016).

While research has investigated the potential relationship between elite use of social media and agenda setting (see, for example, Feezell, 2018), little is known about the extent to which messages sent by politicians online can influence public discussion, especially the effect of negative campaign messages, which have been the focus of a vast body of literature in electoral politics (Geer, 2006). Research that studies political discussion

online often focuses on the volume of uncivil interaction. Scholars have questioned the value of online political talk because it fails to meet ideas of rational, deliberative discussion in large part due to the pervasiveness of uncivil exchanges (Coles and West, 2016; Davis, 2005; Santana, 2014). As well, research on public discussion directed at politicians or candidates on social media has often prioritized interactivity (or lack thereof) between citizens and elected representatives (Theocharis et al., 2016; Tromble, 2018), instead of interactions among the public. To our knowledge, no studies have examined the relationship between elite messaging and ordinary public discussion on social media from the standpoint of candidates' discourse potentially driving public discussion.

To fill this gap, we analyze Hillary Clinton's and Donald Trump's campaign messages and public comments on their Facebook walls during the three televised debates in the 2016 general election. Specifically, we investigate volume of uncivil discourse in each candidate's wall, analyze the words associated with incivility targeted at candidates, and examine the relationship between campaign messages and public comments. Presidential debates are important campaign events, as they provide citizens the opportunity to learn about the candidates, inform their decision for whom to vote, and draw large audiences (Jamieson and Birdsell, 1990). As media events, debates are among the political moments in which citizens can engage in "dual-screening"—sharing in mutual viewership so as to interact with the content produced by candidates, and share opinions, reactions, and impressions (Chadwick et al., 2017).

We hypothesize a relationship between the types of messages posted by the candidates on Facebook and the tone of comments by the public. In particular, we expect that negative campaign messages that attack an opponent's character or policy positions will be associated with more uncivil reactions by the public, while positive messages that advocate for the candidate will be associated with less public incivility. We also hypothesize that the public is more likely to adopt uncivil rhetoric when attacking candidates and campaigns. Although these hypotheses are anchored in research on negative campaigns, the relationship between what candidates are saying on social media and the presence of incivility in public comments has yet to be explored.

We used supervised machine learning to analyze the posts by the candidates and by the public, and content analysis to examine incivility. Our results suggest that incivility occurs rather frequently when the public is commenting on candidates' pages, with about one-third of all comments being classified as uncivil. We also found differences between candidates, with Hillary Clinton receiving significantly more uncivil comments than Donald Trump. Our findings also suggest that there is no clear pattern in terms of campaign communication strategies driving incivility by the public. We expected candidate's negative messages to be associated with uncivil comments, but instead we found a positive association between uncivil public comments with all message types posted by candidates. Thus, while attacks by the candidates were associated with uncivil public discourse, other communication strategies were also likely to spark incivility. As hypothesized, though, when the public attacks a candidate, the attack is likely to be uncivil. Taken together, these findings suggest that campaigns on social media are subject to a considerable amount of uncivil discourse and that incivility is associated with most communicative strategies used by campaigns and not just with attacks. We propose that the public may perceive uncivil comments as appropriate on candidate Facebook walls regardless of the discourse produced by the candidates. The results also suggest that voters who are more critical are also the ones more likely to adopt uncivil rhetoric.

Political Campaigns and Public Comments on Social Media

Presidential campaigns in the United States and worldwide have embraced social media platforms as strategic communication tools to reach voters (Kreiss, 2012, 2016; Stromer-Galley, 2019). These platforms have become central to campaigns' strategies given their availability and use—over 79% of US adults are on Facebook (Greenwood et al., 2016), and roughly two-thirds of Americans use social media to access news (Shearer and Gottfried, 2017). Social media platforms enable campaigns to bypass the traditional media outlets to communicate directly with voters, to cultivate and engage communities of supporters, and to push their agenda and perspectives to a broader audience—often setting the agenda for media coverage (Kreiss, 2012; Stromer-Galley, 2019). In the 2016 presidential elections in the United States, campaigns leveraged social media affordances to target the electorate and deliver carefully crafted messages to specific voter demographics (Kreiss and McGregor, 2018).

Despite the hopes that the Internet would make campaigns more open to the public by enabling direct communication between voters and candidates, scholars have found that campaigns are not interested in opening these venues for bilateral communication—in part because it is costly to respond to citizens' inquiries (Stromer-Galley, 2000). Instead, campaigns engage in what Stromer-Galley (2019) defines as controlled interactivity—using digital platforms such as social media to mobilize supporters and engage them in ways that are ultimately beneficial for the campaign and align to their goals. Examples are donating to the campaign or volunteering for activities, and sharing a message on social media to amplify the candidates' reach beyond their supporter base. As well, campaigns use social media to broadcast their message to voters directly, bypassing the traditional gatekeeping of journalists and media outlets (Graham, 2013)—a strategy mastered in the 2016 campaign by Trump (Stromer-Galley, 2019).

The body of research on digital campaigns has largely focused on how candidates use social media, with less attention to how the public engages with them in these platforms—perhaps influenced by the findings that campaigns are not particularly interested in opening channels for genuine communication with voters (Graham, 2013; Stromer-Galley, 2019; Tromble, 2018). While campaigns may prefer more control over the message and less direct interaction with voters, their presence on social media platforms opens a venue for public discussion and criticism. When candidates use Facebook or Twitter, they cannot control the ability for other users in these platforms to contact them, to post comments in their pages, or to reply to their Tweets. Naturally, the ability of the public to comment on candidates' pages does not necessarily mean that there is dialogue with candidates or that each comment is a prompt for dialogue and discussion. Rather, people often make comments on social media posts and websites to express their opinions and perspectives in a public manner (Reagle, 2015). However, because these comments are inherently public, they may also shape the ways voters perceive the campaign online. That is, if comments on a candidate's page are predominantly positive, the public may believe the candidate is widely supported and popular. As well, if comments are negative or critic, they may affect how the public perceives a candidate's image.

Studies focused on how the public engages with candidates on Twitter have found that voters often adopt an uncivil tone toward politicians (Theocharis et al., 2016). Uncivil discourse is a pervasive feature of online political talk and can be found in nearly any venue where people engage in discussions (Herring et al., 2002; Hill and Hughes, 1997; Mabry, 1997; Phillips, 2016). Incivility online regularly takes the form of personal

attacks, name-calling, pejorative speech, and vulgarity (Coe et al., 2014; Rowe, 2015; Santana, 2014).

Incivility is conceptually hard to define (Jamieson et al., 2017). In the context of deliberative democracy, civility refers to interpersonal respect and to one's ability to engage in respectful interactions and to recognize others' views as legitimate even when faced with disagreement (Habermas, 1996; Jamieson et al., 2017). Coe et al. (2014: 660) define incivility as "features of discussion that convey an unnecessary disrespectful tone towards the discussion forum, its participants, or its topics." For Mutz and Reeves (2005), incivility is related to lack of respect or demonstrations of frustration with the opposition, a definition strongly related to contexts of political arguing and disagreement. Although there is no consensual definition, Jamieson et al. (2017) argue that civility is often related to interaction norms, with uncivil discourse being perceived somewhat consistently as rude or inappropriate behavior—which, as noted by Herbst (2010), makes incivility highly fluid and contextual.

While some scholars have questioned the potential for online discussions to produce beneficial outcomes for democracy because of the presence of incivility, research suggests that those who engage more often in political discussions are also the ones more likely to adopt uncivil discourse and to perceive these behaviors acceptable (Hmielowski et al., 2014). As well, research suggests that people have nuanced perceptions of uncivil discourse and tend to perceive some types of behavior as acceptable—for instance, uncivil political disagreement is not perceived as a highly offensive behavior, while personal attacks are more consistently considered inappropriate (Kenski et al., 2017; Muddiman, 2017; Stryker et al., 2016). Incivility may also be used as a rhetorical asset—one that both politicians and the public mobilize in strategic ways to present their opinions and perspectives (Benson, 2011; Herbst, 2010; Rossini, 2019).

Thus, while it is important to understand the extent to which voters are uncivil when discussing politics and engaging with candidates online, the presence of incivility should not, in itself, be enough to dismiss online political talk as an important democratic practice (Rossini, 2019). Rather, it is relevant to understand the dynamics around uncivil discourse in political campaigns. Campaigns adopt different communicative strategies on social media—such as posting messages that help build a positive image of the candidate, attacking opponents, or calling supporters to act and engage with the campaign (Rossini et al., 2018). Considering the highly antagonistic context of the 2016 presidential elections in the United States, we hypothesize that there is a positive relationship between messages posted by the candidates attacking opponents and incivility in public comments.

H1: Uncivil comments are positively associated with attack messages by the candidates.

When the public posts to a candidate's Facebook wall, the purposes of those comments likely are varied. Some may comment on the candidate, others may engage in exchange with other members of the public. Some research suggests that people may strategically use uncivil messages as a way to amplify their message above the noise of others (Mutz, 2015) and to rhetorically signal their outrage (Berry and Sobieraj, 2016; Herbst, 2010). In other words, the public when they are criticizing candidates and others on social media, may do so in uncivil ways.

H2: Public attack messages are positively associated with uncivil discourse markers.

In the context of the 2016 campaign, and in light of Trump's vulgar eloquence—"a crude, no-holds-barred emotional expressiveness meant to rile his base" (Stromer-Galley, in press)—we seek to understand how much incivility was present on public comments during the presidential debates, the extent to which uncivil discourse might be associated with different candidates, and with different words and phrases that are clearly referring to each candidate. We do so to better understand the nature of targeted uncivil messages. As such, we ask,

RQ1: To what extent is the public uncivil when commenting on candidates' Facebook pages?

RQ2: Are there differences in the volume of uncivil comments received by Clinton and Trump?

RQ3: Are the words associated with incivility clearly referencing the candidates?

RQ4: Are there differences in words associated with incivility targeted at candidates when the source of the comment (Trump or Clinton's page) is taken into account?

## Presidential Debates in the Social Media Era

Presidential debates are key events, as they provide citizens the opportunity to learn about the candidates, inform their decision for whom to vote, and draw large audiences. Debates are important sources of information for voters, as they are an opportunity to compare candidates side-by-side when they are discussing similar topics (Jamieson and Birdsell, 1990). Research suggests that debates help voters learn more about policy and issues, and those who watch the debate tend to evaluate candidates based on their issue-stance (Benoit et al., 2003). Debates may also influence perceptions of a candidate's character and personality, which are also relevant for voters' decision making (Benoit et al., 2003).

Candidates leverage the high visibility and public interest around debates to broadcast messages on social media, posting quotes and pictures. They also take advantage of social media to attack their opponents and criticize their answers to debate questions. The first debate between Trump and Clinton drew 83 million viewers: the largest in US history. The second debate also drew a large audience of 66.5 million people, considering only the TV networks. The third and final debate drew 71.6 million viewers.[2] The audience reported for these debates considers only the television networks and does not consider the online live streams hosted by platforms such as YouTube and Twitter.

Campaigns post to their Facebook pages while the debate is unfolding. They do so to energize their supporters, to give them talking-points that might then spread beyond the campaign's reach to that of their supporters' friends and family, and to counter-argue opponents' messages during debates (Stromer-Galley, 2019). Examples of the types of posts used during the debates are provided in Figure 1.

For these reasons, we opted to focus our analysis on the discussions around posts made by candidates during the three presidential debates, considering that these moments would attract public attention to the candidates and potentially reach voters beyond the supporter base. Research has suggested that many citizens go online while watching political debates—a practice referred to as dual-screening—to seek out information about the candidates, to share their opinions about the debates, and engage in
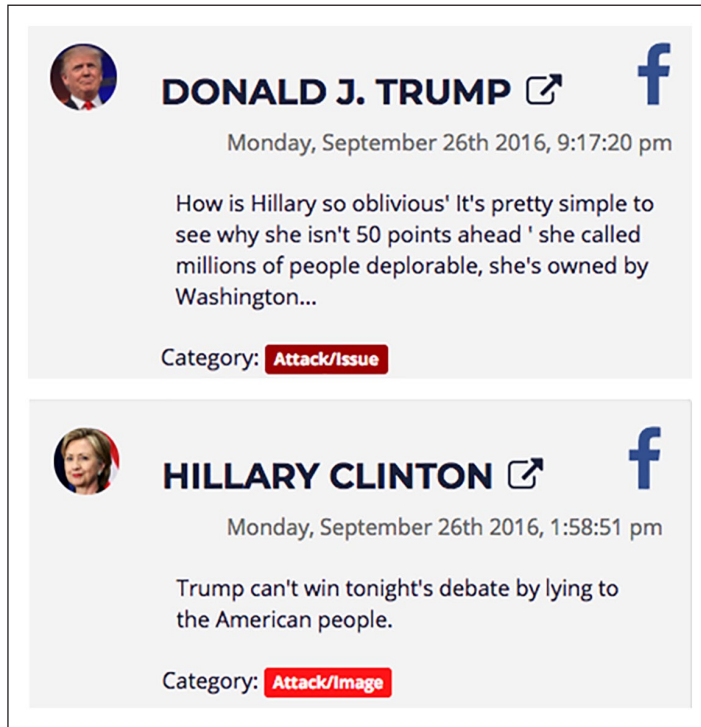
Figure 1. Candidate Posts During the Debate.
Source: illuminating.ischool.syr.edu.

discussions with others (Chadwick et al., 2017). Given the media spectacle that debates provide (Jamieson and Birdsell, 1990), we aimed to analyze Facebook discussions when a likely broader segment of the public would be engaged and attentive to the political campaign and drawn to post on candidate accounts.

Methods

This study focuses on the comments on Facebook posts on the candidates' pages during the three 2016 Presidential Debates during the general election. The first debate between Trump and Clinton took place at Hofstra University, in New York, on 26 September and drew a record-breaking audience of 83 million viewers, the largest in the United States. The second debate took place at Washington University in St. Louis, Missouri, on 9 October, and the third and last debate was on 19 October, at the University of Nevada. All debates ran from 9 PM to 10:30 PM Eastern Time.

We used the dates and times around the three debates to identify posts made by Hillary Clinton and Donald Trump in their official Facebook pages during the televised debates (N = 158). Given the large universe of comments in these posts, we then used stratified random sampling to select 10% of the comments made in posts by each candidate during each debate, resulting in 42,967 comments. We opted for a stratified sample instead of a simple random sample to account for the differences in the number of comments received in each post, by each candidate, during each debate—as there are substantial differences in the number of comments received by candidates in each post.

We used systematic content analysis to classify public comments as civil or uncivil, following procedures described by Neuendorf (2002). For the purposes of this study, messages classified as uncivil are the ones that contain unnecessarily pejorative, harmful, or dismissive language. Incivility also includes expressions of racism, xenophobia, homophobia, sexism, or other forms of discriminatory stereotyping. Civil messages are operationalized as the absence of uncivil characteristics. The sample was coded independently by two coders, and intercoder agreement was measured on a random sample of 200 public comments (Krippendorff's $\alpha = 0.85$). Messages that were not in English, contained only links with no text, or were empty were flagged by coders and excluded from the analysis (N = 1988). In total, the dataset used for analysis had 40,979 comments.

We categorized presidential campaign Facebook posts into four types: calls-to-action, informative, advocacy, and attack. Calls-to-action includes messages placing some force on the reader to act. This includes traditional means of engagement (e.g. volunteering or attending an event), digital engagement (e.g. visiting a website or sharing a post), tuning in to media appearances, donating money, buying merchandise, or voting. Informative messages provide neutral information about the campaign or election. The goal of these messages is to share general information about the campaign or election for the sole purpose of informing. An attack message is operationalized as one that criticizes an opponent, or opposing administration, or political party, based on personality, leadership skills, past behaviors, policy positions, campaign events, family members, surrogates, or anything else with negative and potentially damaging implications. An advocacy message is operationalized as one that expresses support for the candidate by highlighting his or her strengths as a leader, current positions, previous policies, or personal history. Advocacy messages may highlight a candidate's current and future policy positions, feature his or her positive personality characteristics, or portray him or her in a favorable way (i.e. as a family person).

To categorize presidential campaign Facebook posts, we applied two automated classification models previously trained and validated (Hemsley et al., 2016; Rossini et al., 2018; Zhang et al., 2017). One of these classification models predicts the main categories while the other predicts subcategories of persuasive messages. We evaluated all classifiers' performance with a F1 score, which is a weighted average of two measures: precision and recall. *Precision* measures how often machine-predicted message types align with human annotated judgments, and it is sensitive to false positives. *Recall* measures whether relevant human-coded message categories can be identified by the classifier and it is vulnerable to false negatives. An F1 score of 1 represents perfect precision and recall. Contrariwise, a 0 would indicate totally incorrect precision and recall. Table 1 presents the performance of our machine learning classifiers.

Public attack is a comment by a member of the public on Facebook that criticizes a candidate's or another person's positions on issues/policies, character, style, or values. *Public support* is a message that advocates or shows support for a candidate or another person's positions on issues/policies character, style, or values. The same machine learning technique was applied to classify public comments as attack and support. Tables 2 and 3 present the performance of our machine learning classifiers.

Targeted Incivility

We applied text mining and machine learning techniques to identify words that are predictive of incivility, using a human-coded dataset of uncivil comments. The data were

Table 1. Performance of Machine Learning Classifiers.

Category	Precision	Recall	F1	No.
Call to Action	0.88	0.86	0.87	1626
Informative	0.67	0.71	0.69	857
Advocacy	0.88	0.89	0.89	1362
Attack	0.72	0.69	0.70	546

Table 2. Machine Prediction Performance of Public Attack.

Category	Precision	Recall	F1	No.
Attack	0.74	0.65	0.69	1354
Not Attack	0.68	0.77	0.72	1309
Micro-average	0.71	0.71	0.71	2663

Table 3. Machine Prediction Performance of Public Support.

Category	Precision	Recall	F1	No.
Support	0.69	0.68	0.69	1136
Not Support	0.77	0.77	0.77	1527
Micro-average	0.73	0.73	0.73	2663

randomly divided into training (80%) and testing (20%) samples, and we preprocessed the text to remove stop words and punctuation. We used a passive-aggressive classifier using Scikit-learn (Pedregosa et al., 2011) to estimate the weight of unigrams, bigrams, and trigrams in predicting incivility. We predicted incivility in the comments of Clinton's page and Trump's page separately, since there are substantially more public comments on Trump's page: 38,568 comments as compared with Clinton's 2242 comments. We note that Donald Trump has received substantially more comments than any other candidate during the entire campaign, not just during the debates. Considering the primaries and the general election period, from 1 February to 8 November, Donald Trump received 18,872,685 comments, which accounts for 52% of all the comments made in candidates' pages when all active candidates in the race after 3 February are included. The popularity of Trump could be explained by his fame and celebrity status, as well as a substantial social media presence, before the electoral bid. The precision, recall, and F1 score of predicting incivility in Clinton's page are 0.73, 0.76, and 0.71, respectively. The precision, recall, and F1 score of predicting incivility in Trump's page are 0.74, 0.70, and 0.78, respectively.

The classifier estimates weights for words associated with civil and uncivil messages, with higher weights meaning a stronger association. For each candidate, we generated two lists of 100 words each: one containing unigrams, bigrams, and trigrams, and another one with just bigrams and trigrams. The reason to generate a list without unigrams is that there are few bigrams and trigrams in the list of a hundred words containing unigrams, but bigrams and trigrams provide more clarity about the target or the purpose of a comment.

Then, the 400 words were qualitatively analyzed by two coders to identify whether they were clearly referring to one of the two candidates. Each word was classified as

Table 4. Logistic Regression Predicting Uncivil Comments.

	B	SE	CI: 2.5%	CI: 97.5%
(Intercept)	−0.38***	0.05	−0.49	−0.28
Post: Call to Action	0.22***	0.03	0.15	0.29
Post: Advocacy	0.19***	0.05	0.09	0.29
Post: Informative	0.15**	0.06	0.03	0.27
Candidate: Trump	−0.37***	0.05	−0.46	−0.27
Nagelkerke Pseudo R²: 0.002				

SE: standard error; CI: confidence interval.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 5. Type of Public Comment × Incivility.

Public comment	Civil	Uncivil	Total count
Attack	3048	3934	38,732
	(43.6%)	(56.3%)	(100%)
Support	4869	2058	2247
	(70.2%)	(29.7%)	(100%)

(a) not referring to any candidates, (b) referring to/attacking Clinton, and (c) referring to/attacking Trump. After analyzing the lists independently, coders met to discuss and adjudicate their disagreements. When the context was insufficient to determine target, coders were instructed to search for the words as they appear in the comments to assess whether there was a clear trend in how the words were being used. If a word appeared associated with multiple targets, it was coded as not referring to any particular candidate.

Results

Our first hypothesis focused on the relationship between the type of message posted by the candidates and civility in public comments, predicting that attacks by the candidates would drive uncivil comments than other message types. To examine these relationships, we used a logistic regression to predict uncivil comments based on the four main types of candidate messages (support, calls-to-action, and informative), using attack as the reference category.[3] Trump was added as a control, as his posts accounted for the majority of comments. The results are presented in Table 4. We find that attack messages by the candidates are less likely than the other message types to be associated with uncivil comments. The first hypothesis was not supported.

The second hypothesis investigated the relationship between public comments of attack and support, and the likelihood that attack messages by the public would be uncivil. In total, 13,909 messages in the dataset were classified as either public attacks or public support. The frequencies of uncivil messages by type of public comment are presented in Table 5, and a chi-square test of independence suggests a significant relationship between civility in public comments and their type, with incivility being more frequently associated with comments that are coded as attacks than with those coded as support ($\chi^2(1) = 1004.9$, $p < 0.001$).

Table 6. Logistic Regression Predicting Uncivil Comments.

	B	SE	CI: 2.5%	CI: 97.5%
(Intercept)	−0.68***	0.01	−0.71	−0.66
Comment: Support	−0.18***	0.03	−0.23	−0.12
Comment: Attack	0.94***	0.03	0.88	0.99
Nagelkerke Pseudo R^2: 0.033				

SE: standard error; CI: confidence interval.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 7. Civil and Uncivil Comments by Candidate.

Candidate	Civil	Uncivil	Total
Trump	24,647 (63.6%)	14,085 (36.4%)	38,732
Clinton	1255 (55.9%)	992 (44.1%)	2247

Table 8. Distribution of Targets of Uncivil Comments.

	Page: Trump	Target: Clinton	Total (N = 400)
Target: Trump	0	14	14 (3.5%)
Target: Clinton	88	64	151 (38%)
No Target	112	122	234 (58.5%)

To further test the robustness of these findings, we ran a logistic regression predicting incivility in comments coded as attack or as support. As comments coded as attack and support correspond to a fraction of all public comments, we created dummy variables for both types, with the reference category being comments not coded as attack or support (N = 27,070). The results are presented in Table 6 and demonstrate that comments that are coded as attacks are significantly more likely to contain uncivil markers, while comments coded as support were less likely to contain incivility.[4]

Our first research question focused on the volume of uncivil comments on candidates' pages. When both candidates' walls are considered, uncivil comments account for about 35.9% of all comments on posts made during the three debates, suggesting that while incivility does not dominate the public discussion, it accounts for over a third of all comments made by the public during the debates.

The second research question focused on differences between the number of uncivil posts received by Clinton and Trump. As shown in Table 7, there are substantial differences in the amount of public discussion generated by each candidate's posts on Facebook, with Trump's posts accounting for nearly 95% of all comments in the sample. A chi-square test of independence suggests a significant relationship between candidates and civility in public comments ($\chi^2(1) = 54.978$, $p < 0.0001$). While Trump's posts receive more comments than Clinton, those on Clinton's page are more likely to be uncivil.

The third research question focused on a qualitative post hoc analysis of the words that were identified as most influential in predicting incivility using text mining and machine learning and asked whether those were clearly associated with either candidate. Table 8 presents the distribution of targets in the list of influential words. Overall, the words

associated with incivility are not always clearly associated with either candidate: 57.5% of the words had no clear target or were associated with multiple targets (including not only the two candidates but also parties and surrogates). There are clear differences in the number of words predicting incivility related to each candidate, however. Clinton is the clear focus of 38% of all unigrams, bigrams, and trigrams on the list. Among the 50 most influential words to predict incivility (e.g. those with higher weights), there are no words associated with Trump, while 13 were clearly associated with Clinton, such as "Killary" (the word with the highest weight), "Killery," "Witch," "Crook," "Hitlery," "Crooked Hillary, "Crooked," "Hillary prison," "lying Hillary," "she's liar," and "hag." Some of these words can be seen as gendered attacks (e.g. hag, witch), while others are associated with derogatory adjectives used by Trump's campaign (Kenski et al., 2018), such as lying, liar, prison, crook, crooked, or connected to conspiracy theories (e.g. Killary).

We used a chi-square test of independence to answer the fourth and final question, asking whether there were differences in the targets of words associated with incivility when considering the source of the comment (Clinton's or Trump's page). The differences are significant, $\chi^2(2) = 18.217$, $p < 0.0001$. Clinton is the main target of words predicting incivility in both sources, but there are more influential words referring to Clinton on Trump's page. However, Trump is only targeted by uncivil comments on Clinton's own page, which could indicate that her supporters use her page to attack her main opponent.

Discussion

Although the use of social media by political campaigns is now routine, research has not interrogated the nature of comments using platforms such as Facebook and Twitter so as to discern whether candidates are subjected to more visible criticism and scrutiny through comments, reactions, mentions, and replies. Likewise, while there has been some discussion on how politicians' discourse on social media influences the agenda for media coverage (Feezell, 2018), scholarship has not examined whether the types of messages that campaigns post on social media can affect the tone of public discourse on the candidate's social media profiles. This study aims to fill this gap by analyzing the tone (civil or uncivil) and the purpose (attack or support) of public comments in the official Facebook pages of the two main presidential candidates in the 2016 US elections, Donald Trump and Hillary Clinton, during the three televised presidential debates. Specifically, we investigate the relationships between the different types of communication strategies employed by candidates on social media and the public's reaction to them. We hypothesized that attack messages posted by candidates would be associated with more uncivil discourse by the public. Our results suggest otherwise: candidate posts classified as advocacy, call to action, and informative were more likely to be associated with public incivility than attacks. This result can be seen as a sign that campaign negativity does not necessarily drive more incivility in public discourse—it may be the case that the uncivil tone adopted by citizens reflects a broader context of polarization and is not triggered by any particular campaign strategy, but by an overall negative sentiment toward a candidate.

The same is not true when considering the different types of public comments. People are significantly more likely to be uncivil in their posts that are attacking candidates, the news media, or other members of the public, and less likely to be so when posting messages that are supportive of others or the news media. These results suggest that uncivil discourse is strategically employed by the public to emphasize negative views, which

aligns with the theoretical and empirical scholarship that suggests that incivility is used as a rhetorical device to amplify their opinions (Herbst, 2010; Mutz, 2015)—perhaps to make it stand out amid the crowded environment of online discussions (Reagle, 2015). Incivility, thus, may be pervasive during polarized political campaigns and might be perceived as acceptable by those who discuss politics online (Hmielowski et al., 2014; Theocharis et al., 2016).

Our study finds that over a third of the comments on candidates' Facebook walls are uncivil, and that Hillary Clinton received substantially more uncivil comments than Trump's, with roughly 44% of the comments on her page being uncivil. Further analysis of the words associated with incivility provided further evidence that uncivil rhetoric in the comments section was often associated with attacks on Clinton, indicating that the public adopted a harsher tone toward her.

There are several possible explanations for this pattern. Prior research has found that uncivil comments may drive more incivility by those who share similar positions, while those on the other side refrain from doing so (Hmielowski et al., 2014). Thus, Trump's mockery and often dismissive tone toward his opponent might have driven his supporters to attack Clinton in uncivil ways—as signaled by the higher presence of words associated with incivility targeting Clinton on Trump's comments, with some of them directly corresponding to attacks made by Trump himself on the campaign trail, such as calling Clinton "Crooked," saying she should go to prison, or calling her a liar (Kenski et al., 2018). Thus, while we did not find a connection between particular types of campaign messages and public incivility, the textual analysis of features associated with uncivil comments suggests that the public might have been influenced by Trump's rhetoric and adopted some of the derogatory adjectives used by the Republican candidate when attacking Clinton. Notably, there are no words associated with incivility clearly targeting Trump on his own page, despite the higher negativity stemming from Clinton's campaign, which may in turn suggest that the uncivil rhetoric by the candidates might help explain the use of incivility by the public. Although we did not analyze incivility in candidates' posts, Trump's use of social media to attack his opponents and engage in "tirades" has been documented by the news media and by researchers (Gross and Johnson, 2016; Stromer-Galley, in press).

Gender and gendered stereotypes may also be driving the incivility directed at Clinton (Carlin and Winfrey, 2009; Evans and Clark, 2016). Several of the words directed at Clinton are gendered, such as "hag" and "witch." The intensity of the attacks, including calling her "Killary" and the word "kill" dominated messages posted to her page, some of which likely were references to conspiracy theories regarding the Clintons and deaths of staff members while they were in political office. The Democratic candidate is much more likely the object of disgust, contempt, and hatred at a rate not seen in expressions about Trump.

It is relevant to note that Hillary Clinton has been the focus of hostile responses by the media and the public while serving as First Lady (Campbell, 1998). For instance, when Clinton ran the first time for the Democratic nomination for the presidency in 2008, she faced the double-bind, to use Jamieson's (1995) phrase, of being too competent and hence unfeminine (Carlin and Winfrey, 2009). When she transitioned from First Lady to Senate candidate for New York, she received substantially more negative scrutiny by the press than her male counterparts (Scharrer, 2002). While some of the dynamics observed in our analysis might be particular to Clinton, research suggests that women politicians are more likely to be scrutinized than their male counterparts, and to be judged against expected

gender norms (Campbell, 1998; Carlin and Winfrey, 2009; Everitt et al., 2016; Jamieson, 1995; Scharrer, 2002). The news media contributes to these stereotypes by covering candidates in ways that are distinct and problematic for women. For example, by focusing on women candidate's appearance and family life at a far greater rate than for men (Aday and Devitt, 2001; Devitt, 2002). Women candidates must negotiate gender norms that mandate that they behave in feminine ways. Yet, if they come across as too feminine, they are viewed as incompetent, but if they are viewed as competent, then they are negatively perceived as unfeminine and as violating what is appropriate for women (Carlin and Winfrey, 2009).

Although we find evidence in our exploratory analysis of gendered differences in how Trump and Clinton were discussed on their campaign Facebook walls, more systematic analysis needed to understand the extent to which public discussion exhibits misogynistic tendencies or if what Clinton experienced was in some ways unique to her. In addition, it is important to note that women are still a minority in US politics, and that Clinton was the first candidate to ever receive a major party nomination in a presidential race. Analysis of the primaries and of the down-ballot races is needed to determine how misogynistic the public discussion truly is.

This study has limitations. While the stratified sampling method aimed at ensuring the representativeness of posts with more or less comments, comments to Trump's pages accounted for a large portion of the sample—which, as we noted, is the case for the entire campaign period, with the candidate accounting for more than half of all comments on Facebook during the primaries and the general election. As well, because we focused on events of high visibility, it is possible that the dynamics of uncivil discourse in public comments is different than in other moments of the campaign. Finally, this study adopts a binary approach to incivility, which does not differentiate mild forms of uncivil discourse from more offensive or extreme ones. As such, we cannot unveil the different rhetorical functions that uncivil discourse may play when the public is commenting on candidates' social media pages. While we used text mining to further address some of the limitations of the binary classification of incivility and unveil the focus on particular targets, this approach does not fully allow us to differentiate vile, harmful, and hateful comments, from less offensive manifestations of incivility. Future research, including our own, needs to answer the call for a more nuanced approach to uncivil discourse online (Muddiman, 2017; Rossini, 2019) to provide a better understanding of how the public leverages social media to interact with candidates during political campaigns.

Our analysis was conducted during the hours during and around the three presidential debates. We chose debates because we aimed to analyze public discussion during the moments of the campaign that served as major media events with large, national audiences, and likely a higher presence of a broader swath of the public commenting than is typical during the rest of the campaign. Twitter broke a record for most tweets during the 2016 presidential debates,[5] and we anticipate that there also is likely greater engagement by the public on campaign Facebook walls. More research is needed to examine public comments during non-debate periods. It is possible that there is heightened incivility by virtue of the context of the debates and the non-deliberative and gladiatorial nature of contemporary debates (Jamieson and Birdsell, 1990). Perhaps incivility is more likely to be driven by candidate posts outside of the more emotionally charged media environment of debates and when candidate comments may more actively be driving the comments rather than contextual cues.

Finally, we acknowledge that our findings may be affected by the presence of Russian hackers and other coordinated state actors working to influence and seed disharmony in the United States during the election period. Reports in 2017 highlighted that the government of Russia engaged in a systematic effort to sow discord in the United States, possibly to advantage Trump in the election (Jamieson, 2018). There is evidence that external actors attempted to influence public discourse on platforms such as Twitter and Facebook. However, while Twitter accounts that were associated with Russian hackers have been publicized, allowing researchers to examine their activity (Badawy et al., 2018; Stukal et al., 2019), little is known about Facebook accounts, pages, or groups used by foreign agents in the 2016 US election. According to Facebook's own report on illegitimate activity, which only provides aggregated data, the coordinated hacker efforts on the platform were mainly identified on public pages and advertisement campaigns, instead of personal accounts,[6] and the names of those accounts were not publicly released. To our knowledge, the weaponization efforts on Facebook were mainly focused on paid advertisement using micro-targeting to reach particular voter demographics (Jamieson, 2018). Given the nature of our data and the lack of metadata coming from the Facebook Graph API, we unfortunately cannot speak to whether comments in our dataset were generated by a coordinated smear campaign by a foreign government. We also recognize that even if hackers were not active in posting comments on Facebook, their other activities on Facebook might have also influenced our results.

Conclusion

This study fills an important gap in the field of digital campaigning by shifting the focus from politicians to the public and investigating how the public engages with candidates on Facebook as well as the extent to which campaign strategies are associated with the tone of public comments online. While it is true that social media does not only enable but can also give visibility to public conversation about elections and political issues—particularly those happening on popular campaign pages on Facebook—these discussions are not always characterized by diverse, respectful exchanges between citizens who are interested in debating topics of public concern. As this study has demonstrated, social media can also help amplify uncivil attacks—both by the candidates and by the public—and therefore potentially undermines the possibility of conversation between people who hold distinct views. The level of polarization of the 2016 US Presidential campaign along with Donald Trump's constant mockery toward opponents on social media, during debates, or in campaign events—attacks that were largely amplified by the news media (Fowler et al., 2016; Stromer-Galley, 2019)—seem to have influenced both the tone and the negativity of public discourse around the candidates.

Our findings can be summarized in three main points. First, negative campaign strategies are often criticized for increasing polarization and animosity in political campaigns (Geer, 2006). However, we find that while negative messages by the candidates are associated with uncivil reactions, they are not more likely to drive public incivility than other message types. This suggests that public incivility may be a reaction to the candidate, or the political climate, instead of a response to particular campaign messages. Second, the use of uncivil discourse by the public is associated with messages attacking the candidates, the media, or other political elites, which suggests a strategic use of incivility in ways that are traditionally adopted by politicians (Herbst, 2010). Third, even though scholars may argue that incivility comes with the territory when it comes to online discussions and

public comments (Rossini, 2019), our study reveals that incivility in the context of the 2016 US presidential campaign was significantly skewed toward Clinton, who was the subject of a higher volume of uncivil attacks and frequently targeted violent and vile comments. While the negativity toward Clinton has been evident throughout her entire political career (Campbell, 1998), we find evidence that the public adopted some of the derogatory adjectives used by Donald Trump in the campaign trail, such as "Crooked Hillary," suggesting that Trump's negative tone toward his opponents may have influenced how the public talked about them and fueled an already negative perception of Clinton.

In conclusion, this study finds that candidates' rhetoric can influence public discourse by setting the tone and fueling attacks across party lines in an already polarized scenario. In turn, the amount of incivility in public comments can undermine the potential for citizens to effectively talk about politics on social media, and at the same time, it makes it even harder for candidates and political elites to benefit from informal conversations among citizens and understand the core issues that affect the electorate.

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Notes

1. https://www.nytimes.com/interactive/2016/01/28/upshot/donald-trump-twitter-insults.html (accessed 1 August 2018).
2. https://en.wikipedia.org/wiki/United_States_presidential_debates,_2016 (accessed 23 August 2018).
3. For this analysis, we removed 441 comments that were not associated with these message types.
4. We tested a model controlling for Trump given the volume of messages on his Facebook posts, but the results suggested a similar pattern, with attacks being significantly more likely to contain incivility than support messages. Thus, we opted for a simpler model.
5. Jarvey (2016).
6. Data taken from Facebook's blog post "Authenticity Matters: The IRA has no place on Facebook," https://newsroom.fb.com/news/2018/04/authenticity-matters/ (accessed 22 July 2019).

References

Aday S and Devitt J (2001) Style Over Substance: Newspaper Coverage of Elizabeth Dole's Presidential Bid. *The Harvard International Journal of Press/Politics* 6 (2): 52–73.
Badawy A, Ferrara E and Lerman K (2018) Analyzing the Digital Traces of Political Manipulation: The 2016 Russian Interference Twitter Campaign. In: *Proceedings of the 2018 IEEE/ACM international conference*

on advances in social networks analysis and mining (ASONAM), Barcelona, 28–31 August 2018, pp.258–265. New York: IEEE.

Benoit WL, Hansen GJ and Verser RM (2003) A Meta-Analysis of the Effects of Viewing U.S. Presidential Debates. *Communication Monographs* 70 (4): 335–350.

Benson TW (2011) The Rhetoric of Civility: Power, Authenticity, and Democracy. *Journal of Contemporary Rhetoric* 1: 22–30.

Berry JM and Sobieraj S (2016) *The Outrage Industry: Political Opinion Media and the New Incivility*. Oxford: Oxford University Press.

Bimber B (2014) Digital Media in the Obama Campaigns of 2008 and 2012: Adaptation to the Personalized Political Communication Environment. *Journal of Information Technology & Politics* 11 (2): 130–150.

Campbell KK (1998) The Discursive Performance of Femininity: Hating Hillary. *Rhetoric & Public Affairs* 1 (1): 1–19.

Carlin DB and Winfrey KL (2009) Have You Come a Long Way, Baby? Hillary Clinton, Sarah Palin, and Sexism in 2008 Campaign Coverage. *Communication Studies* 60 (4): 326–343.

Chadwick A, O'Loughlin B and Vaccari C (2017) Why People Dual Screen Political Debates and Why It Matters for Democratic Engagement. *Journal of Broadcasting & Electronic Media* 61 (2): 220–239.

Coe K, Kenski K and Rains SA (2014) Online and Uncivil? Patterns and Determinants of Incivility in Newspaper Website Comments. *Journal of Communication* 64 (4): 658–679.

Coles BA and West M (2016) Trolling the Trolls: Online Forum Users Constructions of the Nature and Properties of Trolling. *Computers in Human Behavior* 60: 233–244.

Davis R (2005) *Politics Online: Blogs, Chatrooms, and Discussion Groups in America*, 1st edn. New York: Routledge.

Devitt J (2002) Framing Gender on the Campaign Trail: Female Gubernatorial Candidates and the Press. *Journalism & Mass Communication Quarterly* 79 (2): 445–463.

Evans HK and Clark JH (2016) "You Tweet Like a Girl!" How Female Candidates Campaign on Twitter. *American Politics Research* 44 (2): 326–352.

Everitt J, Best LA and Gaudet D (2016) Candidate Gender, Behavioral Style, and Willingness to Vote: Support for Female Candidates Depends on Conformity to Gender Norms. *American Behavioral Scientist* 60 (14): 1737–1755.

Feezell JT (2018) Agenda Setting Through Social Media: The Importance of Incidental News Exposure and Social Filtering in the Digital Era. *Political Research Quarterly* 71 (2): 482–494.

Foot KA and Schneider SM (2006) *Web Campaigning*. Cambridge, MA: MIT Press.

Fowler E, Ridout T and Franz M (2016) Political Advertising in 2016: The Presidential Election as Outlier? *The Forum: A Journal of Applied Research in Contemporary Politics* 14 (4). Available at: https://wesscholar.wesleyan.edu/govtfacpub/12 (accessed 11 January 2018).

Geer JG (2006) *In Defense of Negativity: Attack Ads in Presidential Campaigns*. Chicago, IL: The University of Chicago Press.

Graham T (2013) Talking Back, but Is Anyone Listening? In Peters C and Broersma MJ (eds) *Rethinking Journalism: Trust and Participation in a Transformed News Landscape*. London: Routledge, pp.114–127.

Greenwood S, Perrin R and Duggan M (2016) *Social Media Update 2016*. Pew Research Center: Internet & Technology. Available at: http://www.pewinternet.org/2016/11/11/social-media-update-2016/ (accessed 1 November 2017).

Gross JH and Johnson KT (2016) Twitter Taunts and Tirades: Negative Campaigning in the Age of Trump. *PS: Political Science & Politics* 49 (4): 748–754.

Habermas J (1996) *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. Cambridge, MA: MIT Press.

Hemsley J, Stromer-Galley J, Tanupabrungsun S, et al. (2016) Collection and Classification of Illuminating 2016 Social Media Data. In: Illuminating 2016. Available at: https://illuminating.ischool.syr.edu/about-us/message-categories/ (accessed 28 November 2019).

Hendriks CM and Lees-Marshment J (2019) Political Leaders and Public Engagement: The Hidden World of Informal Elite–Citizen Interaction. *Political Studies* 67: 597–617.

Herbst S (2010) *Rude Democracy: Civility and Incivility in American Politics*. Philadelphia, PA: Temple University Press.

Herring S, Job-Sluder K, Scheckler R, et al. (2002) Searching for Safety Online: Managing "Trolling" in a Feminist Forum. *The Information Society* 18 (5): 371–384.

Hill KA and Hughes JE (1997) Computer-Mediated Political Communication: The USENET and Political Communities. *Political Communication* 14 (1): 3–27.

Hmielowski JD, Hutchens MJ and Cicchirillo VJ (2014) Living in an Age of Online Incivility: Examining the Conditional Indirect Effects of Online Discussion on Political Flaming. *Information, Communication & Society* 17 (10): 1196–1211.

Jamieson KH (1995) *Beyond the Double Bind: Women and Leadership*. Oxford; New York: Oxford University Press.

Jamieson KH (2018) *Cyberwar: How Russian Hackers and Trolls Helped Elect a President—What We Don't, Can't, and Do Know*. Oxford; New York: Oxford University Press.

Jamieson KH and Birdsell DS (1990) *Presidential Debates: The Challenge of Creating an Informed Electorate*. Oxford; New York: Oxford University Press.

Jamieson KH, Volinsky A, Weitz I, et al. (2017) The Political Uses and Abuses of Civility and Incivility. In: Jamiesone KH and Kenski K (eds) *The Oxford Handbook of Political Communication*. New York: Oxford University Press.

Jarvey N (2016) First Presidential Debate Breaks Twitter Record. *The Hollywood Reporter*, 26 September. Available at: https://www.hollywoodreporter.com/news/first-presidential-debate-breaks-twitter-932779 (accessed 30 July 2019).

Kenski K, Coe K and Rains SA (2017) Perceptions of Uncivil Discourse Online: An Examination of Types and Predictors. *Communication Research*. Epub ahead of print 3 April 2017. DOI: 10.1177/0093650217699933.

Kenski K, Filer CR and Conway-Silva BA (2018) Lying, Liars, and Lies: Incivility in 2016 Presidential Candidate and Campaign Tweets During the Invisible Primary. *American Behavioral Scientist* 62 (3): 286–299.

Kreiss D (2012) *Taking Our Country Back: The Crafting of Networked Politics from Howard Dean to Barack Obama* (Oxford Studies in Digital Politics). Oxford; New York: Oxford University Press.

Kreiss D (2016) *Prototype Politics: Technology-Intensive Campaigning and the Data of Democracy* (Oxford Studies in Digital Politics). Oxford; New York: Oxford University Press.

Kreiss D and McGregor SC (2018) Technology Firms Shape Political Communication: The Work of Microsoft, Facebook, Twitter, and Google with Campaigns During the 2016 U.S. Presidential Cycle. *Political Communication* 35 (2): 155–177.

Mabry EA (1997) Framing Flames: The Structure of Argumentative Messages on the Net. *Journal of Computer-Mediated Communication* 2 (4): JCMC241.

Muddiman A (2017) Personal and Public Levels of Political Incivility. *International Journal of Communication* 11: 3182–3202.

Mutz D (2015) *In-Your-Face Politics*: *The Consequences of Uncivil Media*. Princeton, NJ: Princeton University Press.

Mutz D and Reeves B (2005) The New Videomalaise: Effects of Televised Incivility on Political Trust. *American Political Science Review* 99 (1): 1–15.

Neuendorf KA (2002) *The Content Analysis Guidebook*, 1st edn. Thousand Oaks, CA: SAGE Publishing.

Pedregosa F, Varoquaux G, Gramfort A, et al. (2011) Scikit-Learn: Machine Learning in Python. *Journal of Machine Learning Research* 12: 2825–2830.

Phillips W (2016) *This Is Why We Can't Have Nice Things: Mapping the Relationship Between Online Trolling and Mainstream Culture*, Reprint edn. Cambridge, MA; London: MIT Press.

Reagle JM Jr (2015) *Reading the Comments: Likers, Haters, and Manipulators at the Bottom of the Web*. Cambridge, MA: MIT Press.

Rossini P (2019) Disentangling Uncivil and Intolerant Discourse. In: Boatright R, Shaffer T, Sobieraj S, et al. (eds) *A Crisis of Civility? Contemporary Research on Civility, Incivility, and Political Discourse*. New York: Routledge, pp.142–157.

Rossini P, Hemsley J, Tanupabrungsun S, et al. (2018) Social Media, Opinion Polls, and the Use of Persuasive Messages During the 2016 U.S. Election Primaries. *Social Media + Society*. Epub ahead of print 19 July 2018. DOI: 10.1177/2056305118784774.

Rowe I (2015) Civility 2.0: A Comparative Analysis of Incivility in Online Political Discussion. *Information, Communication & Society* 18 (2): 121–138.

Santana AD (2014) Virtuous or Vitriolic: The Effect of Anonymity on Civility in Online Newspaper Reader Comment Boards. *Journalism Practice* 8 (1): 18–33.

Scharrer E (2002) An "Improbable Leap": A Content Analysis of Newspaper Coverage of Hillary Clinton's Transition From First Lady to Senate Candidate. *Journalism Studies* 3 (3): 393–406.

Shearer E and Gottfried J (2017) *News Use Across Social Media Platforms 2017* (Pew Research Center's Journalism Project). Available at: http://www.journalism.org/2017/09/07/news-use-across-social-media-platforms-2017/ (accessed 1 November 2017).

Sobieraj S and Berry JM (2011) From Incivility to Outrage: Political Discourse in Blogs, Talk Radio, and Cable News. *Political Communication* 28 (1): 19–41.

Stromer-Galley J (2000) On-Line Interaction and Why Candidates Avoid It. *Journal of Communication* 50 (4): 111–132.

Stromer-Galley J (2019) *Presidential Campaigning in the Internet Age*, 2nd edn. Oxford: Oxford University Press.

Stromer-Galley J (in press) Vulgar Eloquence in the Digital Age: A Case Study of Candidate Donald Trump's Use of Twitter. In: Taras D and Davis R (eds) *Political Leadership and Social Media*. New York: Routledge.

Stryker R, Conway BA and Danielson JT (2016) What Is Political Incivility? *Communication Monographs* 83 (4): 535–556.

Stukal D, Sanovich S, Tucker JA, et al. (2019) For Whom the Bot Tolls: A Neural Networks Approach to Measuring Political Orientation of Twitter Bots in Russia. *SAGE Open*. Epub ahead of print 12 April 2019. DOI: 10.1177/2158244019827715.

Theocharis Y, Barberá P, Fazekas Z, et al. (2016) A Bad Workman Blames His Tweets: The Consequences of Citizens' Uncivil Twitter Use When Interacting With Party Candidates. *Journal of Communication* 66 (6): 1007–1031.

Tromble R (2018) Thanks for (Actually) Responding! How Citizen Demand Shapes Politicians' Interactive Practices on Twitter. *New Media & Society* 20 (2): 676–697.

Xenos MA and Foot KA (2005) Politics as Usual, or Politics Unusual? Position Taking and Dialogue on Campaign Websites in the 2002 U.S. Elections. *Journal of Communication* 55 (1): 169–185.

Zhang F, Stromer-Galley J, Tanupabrungsun S, et al. (2017) Understanding Discourse Acts: Political Campaign Messages Classification on Facebook and Twitter. In: *Proceedings of the International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation*, Washington, DC, 5–8 July, pp.242–247. Cham: Springer.

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