



Full Length Article

Setting socially mediated engagement parameters: A topic modeling and text analytic approach to examining polarized discourses on Gillette's campaign

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ARTICLE INFO

Keywords:

Socially mediated discourses
Fragmentation
Polarization
Corporate social advocacy
Information cascades
Hashtags
Topic modeling

ABSTRACT

Opinions on social and political issues can be easily polarized in socially mediated contexts. Using an inductive topic modeling and text analytical approach, the study analyzes more than 100,000 original tweets on polarized discussions on Gillette's controversial campaign addressing toxic masculinity. Results suggest that influencers serve as ideological hyper-prototypes that attract significant attention equally from supporters and detractors, while hashtags and users' reference of current events span the conversations across multiple contexts. Study results also indicate that horizontal information cascades from external ideologically centered sources that serve users' identity and ideological signaling are a potential contributor of discourse polarization. Based on the study results, an identity- and representation-based approach to understanding socially mediated discourses is proposed, and four parameters of socially mediated engagement identified to further theorize engagement for public relations research in digital contexts.

1. Introduction

In recent years, many companies have engaged in high-profile social advocacy efforts, from Starbucks' Race Together campaign to Pepsi's failed attempt to promote unity that many believe trivializes the Black Lives Matter movement. With the growing trend of companies using social media to promote and publicize such efforts, an in-depth look at online reactions to these campaigns is needed. Social media platforms such as Twitter are ideal for users to engage in vibrant exchanges of information (Vaccari, Chadwick, & O'Loughlin, 2015). As heated and even hostile these exchanges can be, discourses on these platforms are multifaceted (Feng, 2016; Jackson & Welles, 2015; Park, 2013). Meanwhile, public relations research has recently turned attention to engagement (Johnston & Taylor, 2018; Taylor & Kent, 2014). Results from examining these discourses around companies' social advocacy campaigns further knowledge on the frameworks and tendencies social media users adopt to engage in such discussions. These insights are valuable to extend theoretical insights on socially mediated engagement.

Several characteristics associated with social media discourses warrant further attention. Influencers and common users differ in their

network positions and prominence (Choi, 2015; Chu & Kim, 2011). Moreover, each social media platforms has unique functionalities that determine and facilitate how users consume content and interact with each other. Particularly, hashtags have been widely used to index content (Bonilla & Rosa, 2015), cultivate a sense of community and networks (Papacharissi & de Fatima Oliveira, 2012) and create connectivity (Bennett & Segerberg, 2012). Finally, issues related to online discourses such as information cascades (Sunstein, 2001; Velasquez, 2012), fragmentation and polarization (Bright, 2018; Dahlberg, 2007) post challenges to users' discussions and involvement.

Given these unique aspects of social media discourses, the purpose of the current research is to examine discourses on Twitter related to an episode of heated debates caused by Gillette's campaign on toxic masculinity. This high-profile campaign led to Gillette being a trending topic for several days, and the overwhelming responses from users provide a great opportunity to examine and analyze characteristics and patterns of socially mediated discourses and how certain platform functionalities enable users' reactions and interactions.

The paper is structured as follows: First, we discussed corporate social advocacy and uniqueness of socially mediated spaces for heated discourses related to corporate social advocacy efforts. Particularly, we

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Received 18 January 2020; Received in revised form 15 August 2020; Accepted 16 August 2020

Available online 14 September 2020

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focused on how users' social influence and platform-specific functionalities such as hashtags may determine certain discourse outcomes. Issues related to information cascades, polarization and fragmentation were also discussed in the literature review. A brief introduction to topic modeling and analysis procedures were described in the method section. Results based on topic modeling, co-occurrence analysis of hashtags and comparison between influencers and common users were reported. We then contextualized these study findings in relation to the role of influencers and factors that contribute to discourse fragmentation. Four parameters important to further theorize socially mediated engagement for public relations research were also identified. Finally, managerial implications for public relations and marketing practitioners on the outcomes of social advocacy campaigns manifested in socially mediated contexts were discussed.

2. Literature review

2.1. Corporate social advocacy in socially mediated contexts

Corporate social advocacy describes organizations' involvement in social-political issues and advocacy efforts (Ciszek & Logan, 2018; Dodd & Supa, 2014; Wettstein & Baur, 2016). In the past few years, corporations have been involved in a variety of social-political topics, such as marriage equality, gun control, climate change and racial justice (Ciszek & Logan, 2018). Research on corporate social advocacy usually spans the boundaries between two areas in public relations scholarship: corporate social responsibility and issues management (Dodd & Supa, 2014). Corporate social advocacy shares similar characteristics with corporate social responsibility as they both reflect corporations' responsibilities and obligations to society beyond immediate economic profits (Auger, 2013; Rim, Lee, & Yoo, 2019). One main difference is that corporate social advocacy actions are usually not related to corporations' business decisions and focus on creating comments on controversial issues that could further impact social changes, while in contrast, CSR practices support many non-controversial topics, such as education and alleviating poverty (Rim et al., 2019).

Though organizations and corporations engaging social advocacy efforts are a positive sign of a democratic society (Taylor, 2010), these organizations may find themselves in a risky situation. Part of the reason is that big corporations have diverse markets and stakeholders, and that social advocacy efforts rarely please all, which can lead to fierce resistance, alienation, boycott, and protest (Ciszek & Logan, 2018; Rim et al., 2019; Weinzimmer & Esken, 2016; Wettstein & Baur, 2016). Furthermore, cynicism and skepticism occur along with corporate social advocacy activities (Gupta & Pirsch, 2006; Kim & Lee, 2009). Publics may be skeptical about organizations' motives and question the real impact of such activities (Gupta & Pirsch, 2006). It does not help when many organizations opportunistically leverage "a high-profile social issue in order to commodify it in a self-interested effort to raise brand awareness and ultimately generate profits" (Logan, 2016, p. 102).

Controversy can be exacerbated in an online, socially mediated environment, where many factors can contribute to fragmentation and polarization of debates. To start, collapsed contexts frequently occur that make the messages more fragmented and frameworks of discussion more volatile (Marwick & Boyd, 2011). Collapsed contexts refer to a phenomenon in socially mediated contexts where intermingling of distinct topics, networks, and self-identities occurs (Davis & Jurgenson, 2014). For example, on social media, we post information related to our work, our personal life, our family, and our opinions on sociopolitical issues. The content itself cross multiple contexts. Similarly, the Black Lives Matter movement has transgressed so many contexts that #BLM or #BlackLivesMatter can be seen in virtually any progressive commentaries or activist events. In essence, this "flattening" of audiences is a signature feature of context collapse (Davis & Jurgenson, 2014). In addition, enclaves, as virtual localities and pockets of users congregating based on similar ideologies, can potentially accelerate groups'

viewpoints moving towards the direction the group members are originally inclined to (i.e., polarization; Colleoni, Rozza, & Arvidsson, 2014; Sunstein, 2001). Even though these phenomena are not unique to socially mediated discourses of corporate advocacy efforts, they set up general parameters of the landscape for researchers who are interested in further theorizing the concept of socially mediated engagement.

In their analysis on socially mediated discourses around Ben and Jerry's political advocacy on Black Lives Matter, Ciszek and Logan (2018) arrived at the conclusion that consensus is almost impossible to achieve, and that dissensus, or discord, is the new frontier of theorizing socially mediated discourses and interactions. Such views are consistent with the recent discussions of dialogues in digital contexts. Digital dialogic engagement occurs in spaces where individuals "share their views, build trust, work through conflict, and then come up with new understandings of the situation" (Taylor & Kent, 2014, p. 395), and digital dialogic engagement provides opportunities to elevate groups' impact to the societal level (Johnston & Taylor, 2018). However, a consensus through this process is not easy, if not impossible, to achieve, as diverse ideas and values clash and compete (Kent & Lane, 2017). In fact, any attempt to genuinely engage other parties involves risk-taking and makes an organization vulnerable to critiques (Kent & Taylor, 2002). Because of disbelief, echo effect, diverse values, competing interests, and the lack of genuine connections, outcomes of exchanges in digital contexts could be very unpredictable; tolerance for risks is crucial for organizations that wish to engage publics in a meaningful way (Huang & Yang, 2015). As suggested in Pearson (1989), communicators need to acknowledge that risk is a normal part of the dialogue and be prepared to talk about topics that are risky, critical, and uncomfortable.

Risks and discords can manifest profoundly when a high-profile campaign suddenly creates a discursive space where fragmented discourses around particular causes or issues intensify. In fact, so controversial is Gillette's campaign that viewpoints are heavily polarized (Hsu, 2019), and it provides a great opportunity to examine the presence of pockets of discourses (enclaves) and the manifestation of fragmentation and polarization. Understanding how the positions in a controversial and polarized issue are reinforced and justified is also a key step to understanding how these enclaves are maintained and sustained. Therefore, the following research questions are proposed to examine the reactions to Gillette's campaign on Twitter.

RQ1: How do social media users discuss Gillette's campaign?

RQ2: How do Twitter users justify and reinforce their opinions?

2.2. Factors influencing socially mediated discourses

2.2.1. Social advocacy and socially mediated discourse

In the era of "advocacy 2.0" (Obar, Zube, & Lampe, 2012), social media platforms have facilitated social advocacy activities. Indeed, social media platforms have accelerated the speed of spreading social advocacy-related discourses and have provided more opportunities for public advocacy and civic engagement. Social media platforms have become a space for individuals to find like-minded peers based on their shared interests, where individuals further form political homophily and "echo chambers" (Bonilla & Rosa, 2015; Tsai, Tao, Chuan, & Hong, 2020). Some influencers on social media become social mediators who possess the power to disseminate information and reshape socially mediated discourses (Tsai et al., 2020).

The ease of participation through social media platforms enables users to fulfill civic engagement and self-organize (Obar et al., 2012). These social media platforms also allow users to freely express their thoughts and opinions. When these discussions are made easier by technologies to rapidly transmit through social connectivity and networks, multifaceted discourses emerge and compete. As a result, it is not surprising to see that social media often react quickly to various social advocacy efforts, including those engineered by corporations, and these

social advocacy events provide a window of opportunity for social media users to shape discourses around social and political issues.

2.2.2. Hashtags and identification

The emergence of socially mediated discourses is often facilitated by many unique functionalities of social media platforms. One distinct feature, hashtags, provides technical affordance for users to interact with content and other users. Hashtags have indexing capacities that allow social media users to retrieve and identify information about a specific topic (Bonilla & Rosa, 2015). They work as user-generated frames for events, sociopolitical issues/topics and social phenomena. More importantly, users can utilize the connectivity infrastructure enabled by hashtags to establish intragroup connections and networks (Bonilla & Rosa, 2015; Vaccari et al., 2015). For instance, the hashtag #MeToo was first employed by Alyssa Milano, Tarana Burke, and many social media users to respond to sexual harassment allegations against Harvey Weinstein. Over time, #MeToo has been used in various contexts to support for women's equal pay, and other women's rights (Xiong, Cho, & Boatwright, 2019).

The ability of hashtags to build sub-communities is attributed to users using hashtags to signal personal identities to find like-minded people with shared experience (Blevins, Lee, McCabe, & Edgerton, 2019). Many hashtags not only represent keywords and topics, but also highlight social media users' interpretations of the event and their positions and identities. Such ideology- and identity-based hashtags foster group identification and contribute to forming of group belongingness (Velasquez, Montgomery, & Hall, 2019), and using a shared set of hashtags has become a major way for social media users to display their identity and identify with others (Wang, Liu, & Gao, 2016). In other words, hashtags create "safe places" for users to express their ideological positions (Blevins et al., 2019) and signal identity (Conover, Gonçalves, Ratkiewicz, Flammini, & Menczer, 2011; Yardi & boyd, 2010).

Even though research overall acknowledges the role of hashtags in forming sub-group communities (Bennett & Segerberg, 2012) and foster identification with like-minded people (Conover et al., 2011), how users engage certain hashtags and how the use of hashtags facilitates or impedes users' discourses on corporate social advocacy efforts are not well studied. Given the tendencies of online users to seek out like-minded people (Colleoni et al., 2014; Hart & Nisbet, 2012; Velasquez et al., 2019), it would not be surprising to see that hashtags, in particular hashtags related to ideological positions and personal identities, can signal group formation and polarization when online users discuss Gillette's controversial campaign. Therefore, we hypothesize that similar identity and ideology-related hashtags are more likely to co-occur in online users' messages, fueling intragroup identification and group formation.

RQ3: How are hashtags used in Twitter users' reactions to the Gillette campaign?

H1. Similar identity- and ideology-related hashtags are more likely to co-occur, compared to informational hashtags.

2.2.3. Influencers

In addition to the metadata tag functionality of hashtags on social media platforms, the role of influencers in socially mediated discourses is indispensable. There is extensive research on how to measure influence and what influence means in socially mediated contexts (e.g., Brown & Feng, 2011; Cha et al., 2010; Lahuerta-Otero & Cordero-Gutiérrez, 2016). A wide range of metrics has been identified, ranging from users' network positions, number of retweets, content creation, to user status (see Riquelme & González-Cantergiani, 2016). The conclusion is that influencers are influential for playing a major role in disseminating information and creating a phenomenon resembling information cascades (Sunstein, 2001; Watts & Dodds, 2007).

Information cascades are defined as information flow influenced by social norms and behaviors of the other people in a group regardless of the private information one may have (Bikhchandani, Hirshleifer, & Welch, 1992). Information cascades are responsible to drive discussions within a group to a specific direction, leading to a group's increased fixation on a particular set of ideas (Velasquez, 2012; Wang, Yang, & Xi, 2018). Information cascades are prevalent in online discussions, and users who have more reach, credibility, prominence, and/or more prominent network positions exert greater influence on the flow of information, therefore precipitating information cascades (Moussaïd, Kämmer, Analytis, & Neth, 2013; Watts & Dodds, 2007). It is worth understanding how influencers manifest in socially mediated discourses in driving polarized discussions.

RQ4: What is the role of influencers in a potentially polarized discursive space?

Previous research has shown that influencers are more likely to actively express their opinions (Choi, 2015; Lahuerta-Otero & Cordero-Gutiérrez, 2016). Other research also supports that social media influencers provide unique value to their followers through productive posting in the areas where they excel at (Hughes, Swaminathan, & Brooks, 2019). Moreover, Watts and Dodds' (2007) research shows that information cascades also depend on a mass of easily influenced people. It is not to negate the importance of influencers in the process, but this simulation research concludes that mass cascades also depend on followers' (uncritical) responses. In fact, evidence exists that non-influencers tend to seek information from influencers' posts (Dhanesh & Duthler, 2019; Kwon, Stefanone, & Barnett, 2014). Given the above information, it can be expected that influencers' discourse is more active towards the campaign and the issue, while non-influencers are more likely to be reactive to other users.

H2. Influencers' online discourse focuses more on the campaign and the issue itself, while non-influencers' online discourse is reactive to other users' messages.

3. Method

3.1. Data collection

In this research, Twitter was selected as the collection platform for two main reasons below. First, we acknowledge that according to the Pew Research Center's research, in 2019, 69 % of U.S. adults used Facebook (Gramlich, 2019). However, after Facebook's data breach crisis, many users felt hesitant to use the platform for sharing their thoughts, and 42 % of Facebook users reduced frequencies for using Facebook (Gramlich, 2019). More importantly, many Facebook users adjusted their privacy setting on Facebook (Perrin, 2018). In 2018, one-third of Facebook users who were above 65 years old adjusted their privacy, while 64 % of 18–49 years Facebook users made the same decision (Perrin, 2018). When many Facebook accounts become private, researchers cannot collect much publicly available information as before. In contrast, Twitter still serves as an open public arena for most of the users, which makes it more appropriate for data collection in this research. Second, Twitter is seen as a public sphere for public discussion, which is a communicative space for debates to occur (Colleoni, et al., 2014). Tweets, and more importantly exchanges of tweets, are valuable to understand patterns and frameworks utilized by users to engage in debates on controversial topics.

Tweets were collected using R package *rtweet* (Kearney, 2019) over the span of 11 days following Gillette's release of its advertisement "The Best Man Can Be" from January 18, 2019 to January 28, 2019. Keyword "Gillette" was used to collect these tweets through interacting with Twitter's standard REST API. Only original tweets (i.e. tweets that have any original content, including tweets that quoted other tweets) were collected. The data collection process resulted in a total of 109,496

tweets. After initial examination of the tweets, some tweets mentioned “Gillette Stadium,” New England Patriots’ home football stadium, which is not related to Gillette’s campaign. After deleting tweets that mentioned Gillette and Stadium at the same time, the final dataset contained 107,641 tweets from 75,302 unique twitter users. See Fig. 1 of the frequency of the data on each day. The number of words of all the tweets in the dataset ranged from 1 to 123, with the median of 17 words and average of 21.94 words.

3.2. Data processing and data analysis

All the tweets were first processed by turning all the letters in to lowercase and removing stop words (such as articles “a,” “an,” and “the”), numbers and punctuation. After this initial processing, each tweet was treated as a document and the document-term matrix was constructed using R package *stm* (Roberts, Stewart, & Tingley, 2018). The terms were further processed and streamlined by setting the lower threshold as 10, meaning that words that did not appear in at least 10 documents were dropped to filter out very uncommon words that did not contribute significantly to the overall discussion of the campaign. The final document-term matrix contained 93,011 documents (tweets) and 8432 terms, which we used for topic modeling.

Topic modeling was conducted to answer the research questions in this study. We used Latent Dirichlet Allocation-based approach that treats topics as a hidden structure of the documents of words (Blei, Ng, & Jordan, 2003). Essentially, the algorithm models a collection (a document) as a random mixture of a set of topics, and the set of topics is modeled as a mixture on a set of vocabulary (words) (Darling, 2011). One challenge regarding topic modeling is the selection of number of topics *a priori*. There are existing statistical indices designed to help researchers decide the appropriate number of topics (e.g., Cao, Xia, Li, Zhang, & Tang, 2009; Deveau, SanJuan, & Bellot, 2014). These indices mostly examine the exclusiveness of the topic as well as the coherence of each topic. Exclusiveness is usually defined as how distinguishable a topic is from the others (Bischof & Airolidi, 2012) and coherence as the likelihood of a topic’s major keywords co-occurring in a document

(Mimno, Wallach, Talley, Leenders, & McCallum, 2011). Yet, even though the advancement of these statistical indices can approximate the number of topics in a corpus of texts, a gold standard barely exists and human interpretations of the topics are still needed (Chang, Gerrish, Wang, Boyd-Graber, & Blei, 2009).

As a result, we implemented an inductive approach to extract the major topics present in these tweets. First, we specified the topic model using Lee and Mimno’s (2014) algorithm, which is available in the *stm* package. Even though this approach does not guarantee producing the precise number of topics, it is a good starting point (Roberts, Stewart, & Tingley, 2014). Then we selected topics whose proportions were at least 1% of the documents. Afterwards, we examined the words with high probability and exclusivity scores, along with 20 most representative examples for each topic to interpret and make sense of the key topics. Finally, we categorized these topics into broader themes for theoretical insights. This approach is similar to grounded theory approach of qualitative analysis assisted by topic modeling, and can be helpful to identify small “pockets” of discourses that share similar semantic meanings, which can be later aggregated to dissect general patterns of these users’ discourses.

To test the first hypothesis, we conducted co-occurrence analysis on the hashtags extracted from all the tweets. To test the second hypothesis, we calculated *TFF* (Twitter Follower Followee) ratio for each user in the dataset as the user’s influence (Riquelme & González-Cantergiani, 2016) and categorized influencers vs. non-influencers based on quartiles. Messages coming from an influencer or a non-influencer were tagged accordingly. We then compared the two text corpora based on the chi-square differences of the frequency of the words to understand how these two groups communicated differently through the words they used.

4. Results

4.1. Topic modeling

Topic modeling following Lee and Mimno’s (2014) approach showed

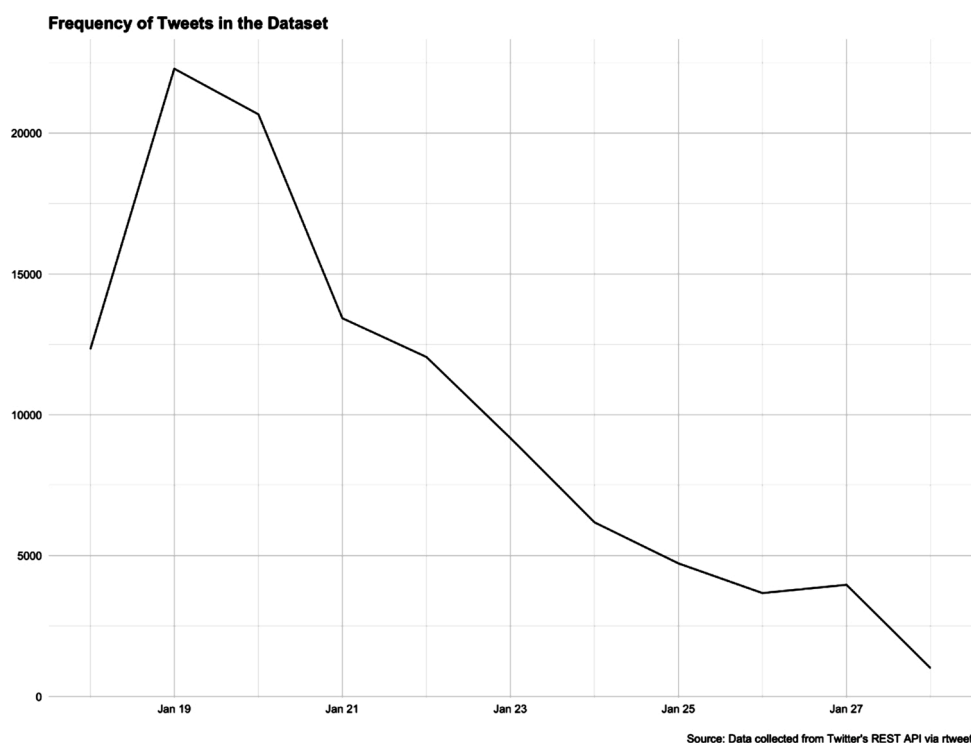


Fig. 1. Frequency of tweets in the dataset.

91 topics. Thirty-three of them had proportions higher than one percent. The 91 topics along with the top words and the topic proportion can be found in Appendix A and Appendix B as supplemental materials of the paper. We further analyzed selected 33 topics whose individual proportion was more than 1 percent of the documents by consulting representative examples of these topics (in Appendix C), its top words, and its semantic coherence index.. Coherence index was calculated based on Mimno et al. (2011). The rationale behind this metric is that top words in a topic should be more likely to co-occur in the same document if the topic model is semantically coherent. Evidence exists in showing that the closer the score is to zero, the more interpretable the topic model is (Puranam, Narayan, & Kadiyali, 2017). We used the top 10 words in each topic to calculate each topic's semantic coherence. Table 1 shows a description on each topic and its main themes (categories).

4.1.1. Reactions

The main category of these topics was reactions, which included reactions to the advertisement, reactions to the backlash, reactions to influencers and debates through reacting to other users. For example, Topics 6, 20, 28 and 44 included debates with each other about the implications of the ad and whether the ad overly criticizes and generalizes masculinity. The following are some examples from these topic profiles:

“@C.Wickenhofer @TaranaBurke @jennygadget @Gillette Foolish to think this has anything to do with right wing or left wing. This mentality is part of the problem. It has nothing to do with politics. Plenty of left and right wingers have acted poorly and harmed others.”

“@wncaudill @Gillette I correct my students everyday, especially the boys. I have 2 moms, 3 sisters, and a fiancé. I know what respecting women looks like, feels like, and seems like. I already told you what the ad should've shown. I correct garbage like this whenever I see it...period, end of story.”

Tweets in these profiles were mostly directed not only to Gillette (@Gillette), but also many other users. However, they mostly did not directly criticize each other, but instead focused on the ad itself.

Related, but slightly different, were Topics 83, 67, 85, which were specifically users' reactions to the backlash of the campaign. In these topic profiles, users usually directly criticized each other's viewpoint on the ad or implied the other side was the problem.

“If you're a man and you're upset by the Gillette commercial... You should smile more, you're so much prettier when you smile.”

“I just watched the Gillette ad and I really don't understand why everyone is getting so butthurt about it?? They're literally just telling you to be better role models???”

“So men are really out here mad that @Gillette is asking them to be better men, raise better men, and hold the men around them to a higher standard?? just....can't....understand it.”

Tweets in these topic profiles were essentially reactions to the backlash but were more aggressive and confrontational than the previous ones.

Another very prominent category in this overall theme was reactions to influencers. Tweets in Topics 88, 17, 71, 49, 69, and 24 were largely triggered by a key influencer's controversial tweet. For example, Topic 88 was mostly the replies and reactions to a tweet by Tomi Lahren (an American conservative political commentator and a Fox News contributor) directed at an American rap singer Cardi B and Stormy Daniels, an adult film actor. The tweet reads,

“Libs applaud @Gillette for taking on violence, sexual misconduct & bullying. They then applaud @StormyDaniels for saying she wants “fist me,” @iamcardib for threatening to dog walk me, and now

Table 1

Topics, Semantic Coherence and Descriptions.

Topic	Category	Coherence	Description
16	Reactions	−263.79	Reactions to the video and the official twitter account of Gillette
83	Reactions to backlash	−161.74	Indifferent reactions to the backlash
81	Reactions, third-party source	−150.25	Egard Watch Company's response video to Gillette's ad
67	Reactions to backlash	−194.28	Sarcastic reactions to the backlash
85	Reactions to backlash	−167.12	Direct mentions of people who are offended
6	Reactions/ Debates	−207.30	Debates about the ad through reacting to others, with more polite tone
29	Reactions, third-party source, parody	−252.42	Spreading a parody video "The Best Ma'am Can Get"
34	Bystanding	−193.92	Indifferent and dismissive attitude about the video
20	Reactions/ Debates	−188.97	Debates about the ad through reacting to others, with more aggressive tone
78	Third-party source	−270.40	Citing criticisms of the ad from Forbes and the New York Post
68	Broader gender issues	−226.12	Pink razors cost more
61	Third-party source	−188.87	Citing an article from the Western Journal
88	Reactions to influencers	−182.87	Reactions to Tomi Lahren's tweet
41	Support	−203.60	Support of Gillette
3	Reactions	−195.58	Specifically citing "Boys will be Boys" campaign slogan to react to other users
73	-	−208.30	Irrelevant ad from Ebay
28	Reactions/ Debates	−184.33	Debates about the ad through reacting to others
89	Third-party source	−214.40	Citing an article from the Western Journal
53	Tie-in with current events	−162.45	Discussing Cavington Catholic High School Students' incident with a Native American elder in DC through the lens of Gillette
17	Reactions to influencers	−217.53	Reactions to Jamela Jamil's comment on Avon_Uk
22	Third-party source, parody	−246.28	Spreading video parodies
76	Debates, third-party source	−309.38	Discussing the commercial with a sizable mention of an article "Barbasol Once Showed Gillette How To Make a Commercial for Real Men" from the Western Journal
60	Third-party source	−178.24	Trade publications analyzing the campaign
25	Tie-in with current events	−224.50	Tie-in with Covington high school/ recent events to justify the needs for Gillette's commercial
71	Reactions to influencers	−189.23	Debate about sexual harassment through the lens of the Gillette's ad, in large as response to @RealCandaceO
63	Boycott	−217.95	Boycott/backlash, citing a YouTube video
32	Boycott	−184.85	Boycott the brand and the parent company Procter & Gamble
49	Reactions to influencers	−244.56	Reactions to @RealJamesWood's tweet
44	Reactions/ Debates	−190.51	Debates amplified by multiple users
10	-	−286.87	Citing an article about Gillette's CEO, not relevant
51	Boycott	−243.34	Expressing intentions to never buy Gillette products
69	Reactions to influencers, boycott	−270.60	Boycott mixed with @GadSaad
24	Reactions to influencers	−231.87	Reactions to @rezaaslan's comment to the Covington High School student

Note. Topics are ordered based on their proportion. Top words and top examples of each topic are included in the appendices as online supporting materials.

enjoy depictions of me being walked like a dog. You're hypocrites and you're sick."

Similarly, Topic 71 was reactions to a controversial tweet by Candace Owens that reads,

"The #Gillette commercial is the product of mainstream radicalized feminism— & emblematic of Cultural Marxism. STOP PERVERTING MASCULINITY. LET LITTLE BOYS WRESTLE. Despite what Lena Dunham tells you, women are not into beta males & men are not into chicks w/ armpit hair."

Equally, users also reacted to liberal influencers' tweets. Topic 17 was mainly reactions to Jameela Jamil's tweet on Avon Cosmetics. Even though this original tweet was not related to Gillette's advertisement, users reacted by including Gillette's ad because of the timing.

"And yet EVERYONE has dimples on their thighs, I do, you do, and the CLOWNS at @Avon_UK certainly do. Stop shaming women about age, gravity and cellulite. They're inevitable, completely normal things. To make us fear them and try to "fix" them, is to literally set us up for failure." [with a picture of an ad that reads "Dimples are cute on your face (not on your thighs)"]

Reactions to this tweet compared Avon Cosmetics' ad with the Gillette's ad and discussed how Gillette's ad would be interpreted if it were an ad targeting women.

Topic 24 consisted of tweets reacting to Reza Aslan's two tweets (@rezaaslan), one of which reads, "Honest question have you ever seen a more punchable face than this kid's?" This tweet came with a picture of the Covington High School's picture confronting a Native American elder in Washington DC, an event that happened around the same time when Gillette's ad rolled out. Users also reacted to this tweet with reference to Reza Aslan's earlier tweet about Gillette's ad, "I am not gonna lie. This made me cry."

4.1.2. Third-party external sources

Another prominent theme in the topic profiles was using third-party external sources to react to the Gillette's ad. Users tweeted certain YouTube videos and online newspaper articles. For example, Topic 81 mainly contained tweets where users cited articles from various outlets reporting on Egard Watches' video responding to Gillette. The video challenged Gillette's ad by praising masculinity. Topic 29 included mainly tweets that spread a parody video titled "The Best Ma'am Can Get." Similarly, in Topic 22 were tweets that cited various YouTube parody videos.

In addition, Topics 78, 61, 89 and 76 all cited articles from outlets such as The Forbes, The New York Post and the Western Journal. Two articles from the Western Journal attracted significant attention (Topics 89 and 76), one on an Army dad posting pictures of him and his kids holding guns challenging Gillette and the other on Barbosol (a shaving razors and cream brand) challenging Gillette.

These topic profiles suggest that users relied on external sources to justify their existing opinions. These external sources offered counter-narratives to Gillette's ad. Users used these sources as building blocks to establish a resisting framework. It is worth pointing out that only the resisting side used such techniques. Users who supported Gillette's campaign messages rarely used any external sources to justify or confirm their agreement.

4.1.3. Tie-in with current events

Topics 53, 25 and 24 revealed that users engaged in discussions about Gillette's ad through tie-in with a prominent event at the same time. This event concerned a group of students from Covington Catholic High School who went to Washington D.C. to participate in a march

against abortion confronting a Native American elder. Many users discussed this event using the rhetorical frameworks of the commercial. For example, one user tweeted, "This ad would be addressing those little punks from Covington Catholic High School who mocked a Native American Vietnam veteran participating in the Indigenous Peoples March" (from Topic 53). Another user posted the following tweet when commenting on this event, "@MollyMcKew @AshaRangappa_ THIS is why we need Gillette commercials. Just gross" (from Topic 25).

Tie-in with current events showed that online discussions collapsed multiple contexts. Discussions were spilled over to other topics and other contexts, which further contributed to the fragmentation of the discourses. This also reflected that users engaged in critiques through the lens of representation combined with the existing rhetorical frameworks established by the campaign. The high school students in this sense represented what was wrong and what the messages in the campaign intended to address. Collapsed contexts were another phenomenon attached to social media discourses on this controversial campaign, where discourses were further fragmented on (un)related topics as long as they could be useful to maintain certain attitudes.

4.2. Hashtags analysis

Following topic modeling, we extracted all the hashtags in these 107,641 tweets. The frequency of the hashtags is shown in Fig. 2. It shows that the brand #Gillette, the advertisement #GilletteAd and key campaign slogans such as #boyswillbeboys #thebestmancanbe #toxicmasculinity were all frequently used. In addition, boycott hashtags (#boycottGillette), politically related hashtags (#metoo, #MAGA and #womensmarch), counter-hashtags (e.g., #toxicfeminism and #toxicfemininity) and recent events (#CovingtonCatholic and #Covington-CatholicHighSchool) were all present.

We calculated the log-likelihood of top 6 hashtags' co-occurrence with other hashtags in the corpus. Log-likelihood indicates how likely two hashtags are to co-exist in the same tweet. The higher the log-likelihood is, the higher chance the two hashtags co-occur. Through examining log-likelihood, we can understand what hashtags are likely to be used and associated together in a set. As shown in Table 2, both #MeToo and #MAGA were identity- and ideology-related hashtags. In addition to some key campaign hashtags, #sexism, #genderequality and #heforshe are more likely to co-occur with #MeToo. The ideological focus of hashtag co-occurrence with #MAGA was even more resounding, with conservative hashtags such as #qanon (related to a far-right conspiracy theory), #buildthewall, #trump and #KAG (Keep America Great). The opinion-related hashtag #BoycottGillette had high co-occurrence of similar counter-narrative hashtags. Hashtags that were both descriptive (as it is a key campaign message) and opinion-based, #ToxicMasculinity and #TheBestMenCanBe, had high co-occurrences with other descriptive campaign hashtags as well as counter-narrative hashtags. In comparison, purely descriptive hashtags #Gillette and #GilletteAd were most likely to co-occur with other descriptive hashtags.

These results supported H1 and demonstrate that self-expression was a major part of using hashtags to engage in polarized debates and discussions. Twitter users expressed their political viewpoints and opinions through using certain sets of hashtags, and they actively manipulated, countered and deconstructed popular hashtags to signal their stance and identity.

4.3. Comparison between influencers and Non-influencers

Finally, the difference between influencers and non-influencers on their discussion of Gillette's campaign was compared. Influence was calculated as TFF (Twitter Follower Followee) ratio. For all the twitter users in this dataset, the minimum TFF ratio was 0, the first quartile was 0.3, the median was 0.6, the 3rd quartile was 1.1, and the maximum was 416237.1. The mean of TFF ratio was 32.2. The wide range of TFF ratio

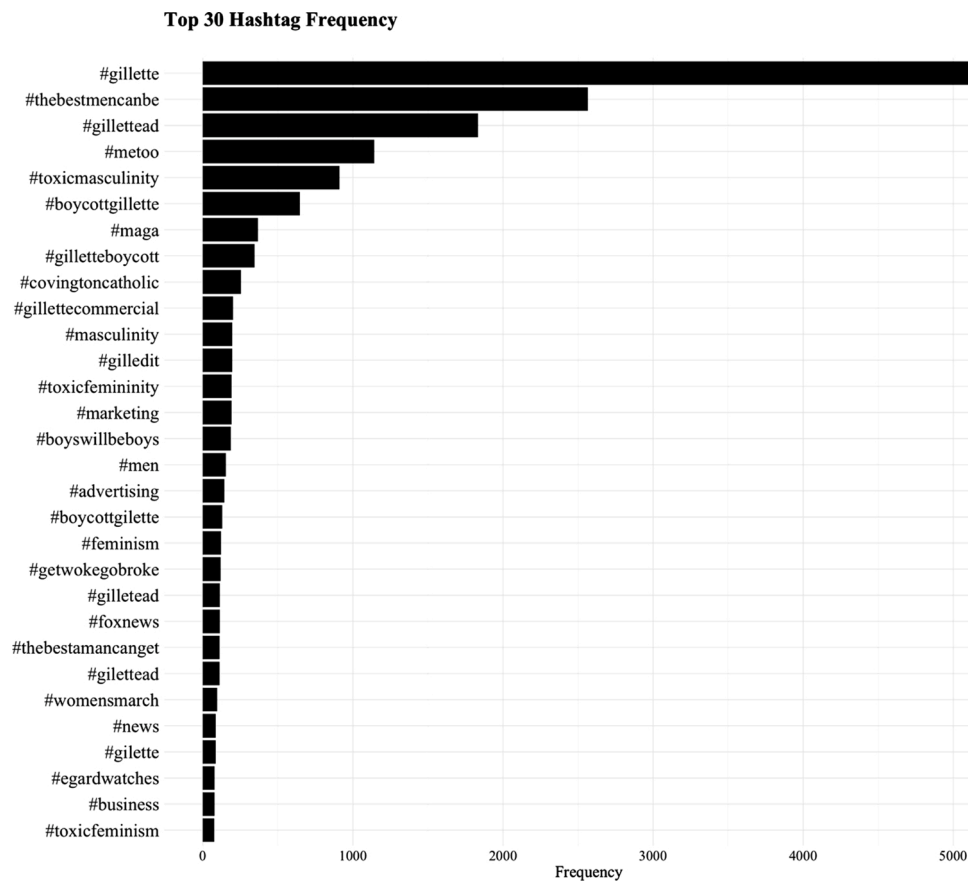


Fig. 2. Most frequent hashtags.

Table 2

Likelihood of hashtags co-occurrence in the same tweet.

#metoo	LL	#maga	LL	#gillette	LL	#thebestmencanbe	LL
#thebestmencanbe	156.86	#thebestmencanbe	92.91	#thebestmencanbe	1033.65	#gillette	1033.65
#gillette	60.96	#qanon	91.51	#gilledit	114.35	#gillettead	206.06
#timesup	44.23	#buildthewall	89.83	#metoo	60.96	#metoo	156.86
#sexism	22.95	#trump	72.78	#gender	60.58	#toxicmasculinity	138.87
#maga	19.76	#kag	64.46	#gilletteboycott	58.75	#boycottgillette	111.54
#webelieve	18.09	#wwg	62.71	#watch	49.44	#maga	92.91
#genderequality	18.09	#tcot	58.21	#gillettecommercial	49.18	#covingtoncatholic	65.68
#heforshe	13.36	#covingtoncatholic	31.46	#gillettead	41.41	#toxicfemininity	40.29
#gillettecommercial	12.70	#marchforlife	28.12	#men	36.45	#boyswillbeboys	36.64
#advertising	10.17	#walkaway	27.33	#strategy	34.52	#marketing	36.47
#gillettead	LL	#toxicmasculinity	LLw	#boycottgillette	LL		
#gilletteboycott	334.77	#thebestmencanbe	138.87	#boycottprocterandgamble	138.50		
#gillettecommercial	267.78	#toxicfemininity	56.66	#thebestmencanbe	111.54		
#thebestmencanbe	206.06	#gillettead	42.40	#masculinityisnottoxic	83.77		
#feminism	85.58	#feminism	41.76	#gowokegobroke	83.37		
#toxicmasculinity	42.40	#men	31.14	#boycottproctorandgamble	54.23		
#gillette	41.41	#boyswillbeboys	30.27	#menaregood	44.58		
#politicalcorrectness	40.61	#feminist	23.09	#meetbarbasol	43.80		
#sjws	38.86	#misogyny	22.27	#feminismiscancer	32.56		
#gilledit	31.85	#racism	18.32	#gillettefail	21.97		
#mgtow	31.54	#toxicfeminism	17.46	#misandry	20.67		

Note. LL indicates the log-likelihood of hashtag co-occurrence in the same tweet. The higher the log likelihood is, the more likely two hashtags co-occur.

has been observed in many other studies as twitter users' numbers of followers and followers usually differ a lot (Riquelme & González-Cantergiani, 2016).

As a result, twitter users whose TFF ratio was among the top quartile were tagged as influencers in the dataset, and those whose TFF ratio was in the bottom quartile were tagged as non-influencers. Then we compared the two datasets based on the chi-square differences of the

frequency of the words. As shown in Fig. 3, the most striking difference was that non-influencers were more likely to discuss the campaign through responding to top influencers or other users on Twitter, while influencers discussed the issue in the campaign and the campaign itself without mentioning others. Such results supported H2.

Word Comparison between Influencers and Non-influencers

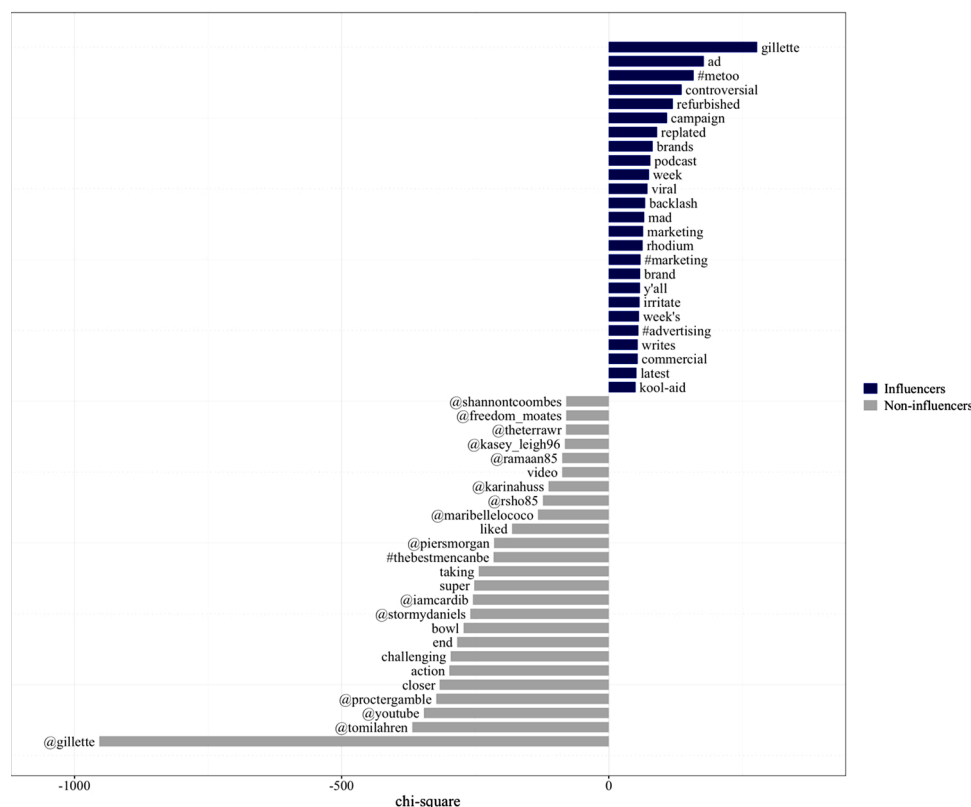


Fig. 3. Word comparison between influencers and non-influencers.

5. Discussion and implications

5.1. Influencers as hyper-prototypes

The first and the fourth research questions ask how users react to Gillette's campaign and how reactions between influencers and non-influencers differ. Not surprisingly, call for boycott and backlash are prevalent. The rampant reactions to other users, high-profile influencers, and backlash show that globally speaking Twitter is a reactive place, where users frequently passively express their opinions through reacting, rather than actively discussing. This is also supported by the comparison between how influencers vs. non-influencers discussed the campaign, which suggests that non-influencers were more likely to address the campaign through responding to others.

On one hand, the current case challenges the assumption that online discussions would globally converge to "echo chambers" where users only interact with others who share similar viewpoints. Yet, discussions reacting to outrageous or controversial comments made by high-profile influencers make up for a major portion of the tweets, indicating that the exchange power still presides in a select few (Chu & Kim, 2011; Dahlberg, 2007) who are able to steer global online conversations in significant ways. Analyzing the topic profiles categorized as reactions to influencers in this study suggests that these influencers become hyper-prototypes of one side. Unlike a normal prototype, hyper-prototypes possess relatively large following on social media, which can command immediate attention from existing followers and can later snowball into clashes between two sides of conflicting viewpoints. Fueled by polarized ideologies, their exclusive affiliation to one side of the debate crystallizes into everything that is right (or wrong) about one side, an ability that normal prototypes or ordinary influencers lack. In other words, each hyper-prototype becomes an exclusive (even sometimes distorted) image and reflection of a mass group. When the

line between them as individuals and the actual opinions becomes blurred, they become dehumanized and are increasingly synonymous to the actual opinions and ideologies. This dehumanization, aggravated by the socially mediated context, becomes a key distinction between normal representation and hyper-representation. On a larger scale, their hyper-representation of ideas or ideologies manifest into overall seemingly chaotic competition of ideas on the platform.

Influencers are influential because of their ability to lead opinions and establish thought leadership (Chu & Kim, 2011; Kapitan & Silvera, 2016). In socially mediated contexts, they can facilitate information cascades (cf. Feng, 2016; Velasquez, 2012; Wang et al., 2018) by widely circulating and disseminating information. Yet, as the study results indicate, a non-trivial factor of influencers' influence in socially mediated contexts is their role in representation, of ideologies and/or of identities. A representation approach to the online discourses is a promising direction to study socially mediated discourses, where representation is more important than the actual information provided, and influencers morph into hyper-prototypes that are usually used by the opponents as strawmen. The more prototypical the influencer is, the more attention will be given. Future studies can further explore the consequences of using prominent influencers as prototypes on social media users' polarization, which can also bridge the areas of intergroup communication research and socially mediated discourses. Additionally, past research has suggested that influencers who can bridge multiple groups are more important (Keller & Berry, 2003; Park, 2013). What characteristics distinguish these influencers from the hyper-prototype influencers and what different roles they occupy in socially mediated contexts are specific promising research questions.

5.2. Fragmentation and collapsed context

The study results are consistent with previous research that positions

an agonistic orientation in socially mediated dialogues (Ciszek & Logan, 2018). The agonistic orientation is aggravated by collapsed contexts and fragmentation facilitated by hashtags. One of the prominent themes in the topic profiles, tie-in with an incident concerning a group of high school students shows that the boundaries of discourses on this particular campaign span across other contexts. Marwick and boyd (2011) defined collapsed context more from an audience's perspective — “flattening multiple audiences into one” (p. 122). In this case, collapsed contexts imply that users span topical boundaries and use other topical frameworks to participate in discourses. As a result, a company's campaign about one social issue becomes interrelated to other socio-political problems in society, triggering discussions beyond the campaign's original objectives or target audiences.

Collapsed contexts enable users to pull multiple readily available rhetorical frameworks from other seemingly unrelated events, as long as these frameworks can be potentially helpful to maintain certain attitudes or make a point. In such a scenario, users actively create discursive spaces at the boundary of multiple events. Similar to localities created by influencers, these discursive spaces draw significant attention from users who would be otherwise indifferent about the original messages, and then become pockets of enclaves themselves.

Furthermore, results on how hashtags were utilized by users to discuss the campaign (RQ3) give further evidence that hashtags provide connectivity infrastructure for self-expression and identification. Self-presentation and self-expression are prevalent on social media (Fox & Warber, 2015; Gil de Zúñiga, Molyneux, & Zheng, 2014; Iqani & Schroeder, 2016; Papacharissi, 2012; Smith, 2010). The hashtag co-occurrence analysis in the study demonstrates that ideological and identity-related hashtags were more likely to co-occur with other similar ideological hashtags, supporting the study hypothesis that users engaged in certain hashtags to signal identities and seek identification. With the ability to self-signal ideology and identities, hashtags, however, fragment discursive spaces further into communities readily retrievable by a simple click. Considering that ideologies and identities naturally span across different contexts and that hashtags can evolve (as what has happened to #MeToo) and be manipulated to fit into ideological frameworks (as many hashtags co-occurring with #MAGA in this campaign have nothing to do with the issue), collapsed contexts can be further enabled by hashtags that contribute to and accelerate fragmentation. For socially mediated discourses around corporate advocacy efforts, an emergence of ideology-centered hashtags can signal fragmentation and polarization of opinions.

5.3. Cross-platform horizontal information cascades in socially mediated contexts

The study results indicate that users relied on external sources to justify existing opinions (RQ2), creating noticeable cross-platform information cascades. If influencers create top-down vertical cascades, cross-platform information creates outside-in horizontal ones. Medium-sized partisan news organizations are usually used as sources for such information flows (Ignatow & Williams, 2011), which is confirmed by this study. Furthermore, the study results suggest that only the resisting side used such techniques. These external sources offered counter-narratives to Gillette's ad and became building blocks of creating a resisting narrative.

The prevalence of counter-narratives on social media is nothing new (Jackson & Welles, 2015; Kuo, 2018). However, Twitter users utilizing external sources in a controversy to counter, challenge and parody the main campaign narrative furthers the understanding of how polarization is exacerbated. The fact that Egard Watch as a little-known company was able to attract significant attention and that users utilized a sensationalized image of an army veteran posting a photo of his children holding guns indicates that only the most ideologically centered information was likely to be tweeted. Polarization is exacerbated because users actively disseminate information that confirms their pre-existing ideology

(Ignatow & Williams, 2011; Messing & Westwood, 2014). The quality and credibility of the information are less of a concern, as long as the information makes a point. Such hyper-prototype information (untypical and dramatic information used to serve certain ideological positions) is most likely to be cited in online controversial debates, dramatizing opinion differences. As a result, the presence of counter-narratives can be detected through how online users utilize external news sources when discussing corporate social advocacy campaigns. An overview of all the cited articles, as proxy, can indicate the prevalent counter-narratives to the intended campaign messages.

Examination on cross-platform information cascades is lacking in current research. Results of the study confirm that cross references are crucial to online discussions when a plethora of information is available at users' fingertips. Future studies can further provide more knowledge on the factors that influence social media users to utilize external sources and confirm whether hyper-prototype information is more likely to be picked up by the users.

5.4. Socially mediated engagement parameters

Public relations in the digital contexts has been conceptualized from a perspective of engagement rather than a perspective of control (Johnston & Taylor, 2018; Taylor & Kent, 2014). Yet, socially mediated engagement is more complicated than just facilitating conversations. In light of the above discussion and the study results, we identify four parameters of socially mediated engagement to theorize this important concept for public relations research going forward.

The first parameter is the degree of control afforded by the platform. The engagement power now resides in users instead of the organization, and this power shift becomes more pronounced when platforms afford easier interactivity. It would be false to conceptualize engagement as in control of the organization. If the organization-centered view has already been challenged in public relations research (Johnston & Taylor, 2018; Taylor, 2009), an organization-centered view of engagement becomes more troubled in socially mediated engagement. The degree of control an organization has in the engagement process relies on the ease of interactions and participatory level afforded by the platform. For platforms that afford less interactivity and participation, the organization may have more control, but for Twitter, where it is highly reactive and more democratic in the sense that users can freely express and interact with each other, the organization has less control and becomes less centered. Social media is in general championed as a homogenous entity that facilitates interactions, but participatory degrees and ease of interactions afforded by platforms widely differ. The interaction of these platform-level factors and engagement sets up the general landscape of socially mediated engagement that determines the level of control assumed by an organization.

The second parameter is the technicality of mediation in socially mediated engagement. Functionalities such as hashtags can break down topical and contextual boundaries, accelerating collapsed contexts. Platforms may have different capacities that lay the foundation of connectivity. The different typologies of connectivity enabled by these functionalities (networks on Twitter are more casually established, whereas those on Facebook more formally established) can be antecedents to the degree of participation and interactions mentioned above. In short, in this dimension, technicality of mediation centers on the technical aspects of the platforms that influence the degree, typologies, and consequences of mediation.

The third parameter is the concept of sociality in socially mediated engagement. As the results of this study indicate, users desire representation and gravitate towards those who can represent their identities and ideologies. Previous research on affective publics also suggests that it is emotional storytelling that possesses the greatest ability to transmit through networked publics (Papacharissi & de Fatima Oliveira, 2012). Emotions and desire for connecting with people who share similar identities and ideologies make up for the very fabric of social

connectivity in socially mediated engagement. Yet, it should be noted that identity signaling on a large-scale, whether it be through users' interactions with identity-signaling influencers, the use of certain set of hashtags, and/or the use of ideology-centered external sources, indicates an increase in in-group mobilization, which can be indicators of further fragmentation of the socially mediated space and polarization of opinions.

The fourth parameter is the orientation of engagement. Recent research on high-profile corporate social advocacy efforts in socially mediated contexts points to the agonistic and discords-oriented style of interactions (cf. Ciszek & Logan, 2018). An agonistic vs. harmonious orientation of socially mediated engagement surely manifests into different engagement landscapes. It is not to deny that harmonious orientation exists. For example, when natural disasters occur, it is common to see that users pour great support into victims. However, in the corporate social advocacy contexts, we can generally assume a somewhat agonistic orientation.

In short, the first parameter lies on the platform itself. The second parameter is related to specific platform features that enable certain user interactions to emerge. The third parameter hinges upon users' socio-psychological inclinations and tendencies that drive connectivity. The fourth parameter indicates the general atmosphere an organization may find itself in. The four parameters lay the foundation for a socially mediated engagement model that provides theoretical insights on engagement in socially mediated contexts.

6. Practical implications

Public relations practitioners face challenges and pressure when companies launch high-profile social advocacy campaigns. We can first expect that discussions around corporate social advocacy efforts to be mostly reactive and volatile, and we need to address these challenges without a mindset of control. Meanwhile, there are patterns and factors that can serve as points of intervention in this seemingly chaotic mediated online space. To start, attention to influencers is still important, not only because of the actual information provided by these influencers, but also because of what they represent. In a polarized online environment, controversial influencers morph into representations of certain ideologies, attracting significant attention from both supporters and detractors, and users' congregation at these influencers indicates a more contentious hostile environment. Furthermore, monitoring hashtags and sources of the articles can be beneficial to gauge the extent of polarization and fragmentation of socially mediated discourses. Particularly, even though articles from medium-sized partisan news organizations may lack credibility and journalistic qualities, opposers widely circulate these articles as long as they make a point. Attention to these publications is highly needed to understand rhetorical frameworks utilized by detractors to counter the intended objectives of the advocacy efforts. Finally, we can also expect to see contexts collapsing in socially mediated space, where users reference other sociopolitical events and topics. Being well-versed in sociopolitical issues and their connections can be a great asset to account for and navigate these unintended consequences.

7. Limitations and conclusion

A major limitation of the current study is its focus on Gillette's campaign. Results of this study may not be applicable to other contexts. Given that this campaign attracted significant attention from the press and that it was a top trending topic on Twitter, this case can still provide valuable insights on Twitter users' interactions at an intense moment. In addition, this study focuses explicitly on Twitter. Even though major social media platforms fundamentally share similar characteristics, each platform has unique features that challenge generalization of study results from one platform to the others.

Albeit these limitations, the study furthers understandings on social media discourses around a corporate social advocacy campaign while

identifying four parameters to theorize engagement in socially mediated contexts for future public relations research. The four parameters focus not only on specific platforms, but also the potential interaction of the technical and social aspects of socially mediated engagement on discursive outcomes of corporate social advocacy efforts. Contextualized in these four parameters, the study also calls for a representation approach to understanding influencers as hyper-prototypes and an identity approach to understanding how hashtags and horizontal information flow serve users' identity signaling and self-expression.

This study reminds public relations practitioners to embrace the benefits corporations could harvest from engaging in social advocacy efforts, and acknowledging the potential risks under the circumstances of collapsed context. For social media platforms, such as Twitter, where users can freely express and interact with each other, corporations and organizations have less control over the content of debates and the results of corporate social advocacy activities. Thus, practitioners need to achieve a thorough understanding of the supported social causes, trends of online discussions, and have contingency plans for potential crises and risks. The four parameters can also serve as a roadmap to understand factors that may affect socially mediated discourses around an advocacy campaign. For example, technicality of mediation urges practitioners to closely examine patterns that may emerge due to platform features, and the notion of sociality indicates that content that are emotionally charged and influencers who resemble hyper-prototypes should be given special attention. They can be identified as "points of intervention" for practitioners to monitor discussions. For public relations scholars, this research furthers the scholarship of corporate social advocacy in socially mediated contexts, explores social media influencers' role as ideological hyper-prototypes, and theorizes engagement in digital contexts. We hope the four parameters of socially mediated engagement identified in this study provide future directions to push this area further.

Declaration of Competing Interest

The authors report no declarations of interest.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.pubrev.2020.101959>.

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