Article

#MeToo, Networked Acknowledgment, and Connective Action: How "Empowerment Through Empathy" Launched a Social Movement

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Abstract

How did efforts that prompted the sharing of personal experiences of sexual violence and harassment around #MeToo coalesce into calls for action across a range of institutions and communities? We argue that sharing experiences of trauma in digital spaces created a *network of acknowledgment*, which supported and sustained nascent #MeToo activism based on the logic of connective action. This article attempts to (a) understand the temporal dynamics of these different discourses within the #MeToo movement on Twitter, (b) reveal the accounts animating these discourses and the most prominent themes within them, and (c) model the overtime relationship between these discourses and their relationship to major news event and #MeToo revelations. To do so, we analyze a 1% sample of tweets from the 5-month period following the revelations about Harvey Weinstein in early October 2017, employing a range of computational approaches, including part-of-speech tagging, dependency analysis, hashtags extraction, and retweet network analysis—to identify key discourses, actors, and themes. We then conduct time series analysis to identify the relationship between the two discourses and predict how the ebbs and flows of each discourse are shaped by news events.

Keywords

affective public, connective action, natural language processing, retweet network analysis, time series analysis

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How did expressive communication about sexual harassment and assault around #MeToo coalesce into activism and calls for action across a range of institutions and communities? We argue that sharing experiences of trauma in digital spaces create a *network of acknowledgment* and that such a network supported and sustained the nascent #MeToo social movement. Hashtag activism—the use of hashtags to show support for a cause on social media platforms—and other forms of collective online expression can offer a public acknowledgment of trauma that provides a forum for open attention to claims, gestures toward common experiences, and affirms a belief in survivors. Indeed, "empowerment through empathy" is the phrase Tarana Burke, founder of the Me Too movement, uses to describe the creation of connection through mutual sharing of trauma:

> One of the worst things about experiencing sexual trauma is feeling like you're all alone . . . Instead, when people say, 'This happened to me too, I understand you,' a connection happens . . . 'Me Too' became the way to succinctly and powerfully, connect with other people and give people permission to start their journey to heal. (Burke, 2017)

As this indicates, the coded imperative of #MeToo fosters empowerment through the construction of connections among survivors. As Clark (2016, p. 789) writes, "a hashtag's narrative logic—its ability to produce and connect individual stories—fuels its political growth. The online telling and connecting of personal stories distinguish hashtag feminism from earlier forms of feminist personal politics." These connections, sustained through testimony and witnessing about harassment and assault, created a networked public around this experience of trauma and recovery. Although members of this networked public may not interact directly with every other member, or with the entirety of the discourses that other members produce, a sense of commonality and cohesion is created by seeing so many others share stories of trauma. It is this online public—this network of acknowledgment—that we contend expanded the #MeToo movement into a wide range of institutions and communities.

Networked acknowledgment of sexual violence in the public sphere also points toward Berlant's (2008) notion of *intimate publics* (i.e., how strangers build communities through affective ties to cultural forms such as books, films, and television shows and see their personal narratives as part of a collective experience) and Papacharissi's (2016) concept of *affective publics* (i.e., how digital technologies facilitate feelings of engagement, belonging, and solidarity that people then use to make their voices matter in public life). And while a platform like YouTube, which allows for personalized video testimonials, may offer more intimate portraits of survivors, it is the volume and velocity of expression possible when tens of thousands (or millions) of individuals can simply use 140 characters[1] to build a matrix of support. These concepts of intimate and affective publics inform our approach to the discourses and relationships underlying the explosion of the #MeToo movement onto the global stage in 2017.

We contend that it is through this sharing of stories and support, in the form of a torrent of posts, retweets, and affirmations, that #MeToo expanded into so many other domains, becoming a social movement. It is now accepted that social media are critical to movement organizing, which has become more fluid and agile in response to digital technologies. Bennett and Segerberg's (2012) conceptualization of connective action through digital communication platforms speaks to such fluidity. However, work by scholars like Dubois and Gaffney (2014) and González-Bailón, Borge-Holthoefer, and Moreno (2013) has focused on influence by opinion leaders or hidden influentials within specified networks, not the power of sustained expressive activity on digital platforms to organize and scale up social movement efforts. Social media often become a space where citizens gather and contest the definition of a movement, potentially translating this energy into off-line actions (Gerbaudo, 2018).

In this sense, our work is more closely linked to efforts to trace the volume of social media discourse over time (Jungherr & Jürgens, 2014) and to understand the content and emotional tone of these communications (Nulty, Theocharis, Popa, Parnet, & Benoit, 2016). Our focus on the #MeToo movement spans the 5-month period following the revelations about Harvey Weinstein in early October 2017. Although our analysis covers the popularization of #MeToo by actress and activist Alyssa Milano (Berger & Milkman, 2012), our concern here is much broader than that catalyzing event. Our analysis attends to (a) the scores of sexual harassment and assault survivors who broke their silence over the next 5 months, (b) the growth of the #MeToo movement and its spread into other social spheres, (c) how these discourses were related to one another, and (d) whether they were also spurred by a string of high-profile figures from diverse professions accused of harassment and assault and the other catalyzing events.

Complicating the #MeToo Movement

These are complex times for feminism. The rise of the #MeToo movement and the organization of Women's Marches across the globe have raised social awareness of gender-related issues and feminism in the public sphere. Yet, serious challenges remain to feminist activism, such as the building of coalitions across diverse identity positions, creating appeals that resonate with a wide swath of citizens, generating sustained engagement in political action, and supporting intersectional voices in feminist movements. The #MeToo provides an illustration of both the successes and challenges of these types of efforts in contemporary politics.

Tarana Burke, social justice advocate and founder of the #MeToo movement, began using the phrase "Me Too" in 2006. After creating the nonprofit _Just Be Inc._ to help young women of color, she introduced the phrase on the social network of MySpace. Burke, a survivor of sexual violence herself, was inspired to create a space for women of color to acknowledge the experiences of sexual violence after meeting with a survivor of childhood sexual abuse. Recognizing that these stories were deliberately ignored or forgotten, "Me Too" became a vital message of a campaign to further "empowerment through empathy" among women of color.

This work dovetailed with prior hashtag activism efforts that sought to prompt and share stories of sexual violence and harassment. In March 2014, Christine Fox introduced #WhatWereYouWearing and asked her followers to answer the question "What were you wearing when you were assaulted?" In May 2014, #YesAllWomen emerged in response to the Isla Vista killings and the release of Elliot Rogers misogynistic "manifesto" to give voice to stories of violence against women (Rodino-Colocino, 2014). Activist and blogger, Feminista Jones, unveiled #YouOkSis in July 2014 to help reduce street harassment specifically experienced by women of color. In April 2015, the founder of The Everyday Sexism Project, Laura Bates, asked women to share stories of daily microaggressions around the hashtag #EverydaySexism (Eagle, 2015). Other examples include NFL domestic abuse-inspired #WhyIStayed, the sarcastic #Safetytipsforladies, and the Trump-inspired story sharing around #NotOkay (Clark, 2016; Domonoske, 2016; Rentschler, 2015).

On October 15, 2017, in reaction to the allegations of sexual assault by Hollywood producer Harvey Weinstein, actress Alyssa Milano used the hashtag #MeToo to inspire a flood of survivors of sexual assault and harassment to make their stories public. Her tweet, "If you've been sexually harassed or assaulted write 'me too' as a reply to this tweet," was retweeted more than 24,000 times, spurring the use of #MeToo half a million times within 12 hour of her post. In all, #MeToo was used 19 million times, with 65% of social media users having encountered content about sexual harassment or assault across platforms (Anderson & Toor, 2018).

Certainly, the #MeToo movement has faced its share of critiques. Most notably, allegations of co-optation emerged as people became aware of Burke's initially unacknowledged contributions. To her credit, Milano responded immediately to these concerns, acknowledging Burke's origination on

Twitter. Other criticisms include the movement's narrow focus on cis-gendered issues in the workplace, especially accountability for perpetrators and policy change within professional settings. This left millions feeling excluded from the emerging activism, including lesbian, gay, bisexual, transgender, and queer or questioning and gender nonconforming individuals, the undocumented, child survivors, people with disabilities, and women of color to name but a few. Despite these limitations, this sharing of stories and expressions of support served as a form of testimony and witnessing.

Testimony, Witnessing, and Intimate Publics

Beginning in the 1960s, feminists developed consciousness-raising—small, informal gatherings to help women share personal experiences of gender discrimination and break free from the isolation that sustains patriarchy (Sarachild, 1978). Organizers encouraged each woman to communicate her own experiences, and then the whole group discussed forms of resisting oppression. This was meant to unite women, fostering recognition that these were not isolated events, that "the personal is political." Women "learned to ask new questions about themselves, built self-esteem and a sense of entitlement to opportunity, gave names to their common experiences and discovered that they were not alone" (Kamen, 1991, p. 4).

For feminist scholars, personal storytelling in informal settings can serve as a form of testimony. Testimony includes statements by those who have lived through events, those who have been told or shown evidence, or those who choose to share their impressions of an event (Felman & Laub, 1992). Testimony also plays an important role in the public sphere in more formalized or heightened performances—such as theater or spoken word poetry—that address issues of personal and political importance (Garlough, 2013). These personal narratives may be used to witness transgressions, encourage discussion, and argue for change. Traumatic events can be made meaningful through hearing, reading, or viewing accounts that make apparent personal engagements with others who share these experiences now or in history.

This view shares commonality with Berlant's (2008) notion of "intimate public," which she uses to explain how women's culture was generated among strangers through access to books, films, and television programs for and about women. This intimate public was grounded in the idea that woman's experience could be shared by other women, no matter how dissimilar. Even without direct contact with one another, the connection to strands of discourse created a public. In this way, strangers could build communities through affective ties, as they connected their personal narratives to others' widely shared collective experiences. There is an expectation that participants of an intimate public share a worldview and emotions derived from common historical experiences or grievances. As such, identification, recognition, and reflection within this intimate public generate a sense of belonging, consolation, and discussion that eventually may contest power relations (Berlant, 2008). This suggests that mediated exposure to others' testimony can spark a sense of commonality and community.

Testimony keeps trauma visible, speaks to suffering of others, and engages in the work of unmasking the truth. Through involvement in a story-sharing network, individuals may engage in critical self-affirmation and verification, while also bearing witness to others' testimony, another key element of this process. Witnessing can involve (1) being a witness to oneself within the experience, (2) being a witness to the testimonies of others, and (3) being a witness to the process of witnessing itself (Felman & Laub 1992, p. 75). Witnessing can often also be painful. As Shoshana Felman recognizes, hearing others' trauma can reawaken memories, a "radically unique burden" for survivors (p. 3). When considering women's experiences of sexual violence and harassment and the value of testimony and witnessing in the public sphere, social media forums have become focal sites of exchange and acknowledgment.

Networked Acknowledgment and Affective Publics

Acknowledgment is a relatively understudied communicative strategy, one that has rarely been used to understand social media discourse. Yet, it provides a powerful framework for understanding #MeToo Twitter discourse. Hyde's (2006) conception of acknowledgment, drawing upon the writing of Heidegger and Levinas, along with Aristotle and the Sophists, sees acknowledgment as a way of "being for others." Acknowledgment is a communicative act that speaks to our personal vulnerability and our strength as a community. Acknowledgment includes the following practices: "(1) To admit, concede, confess a thing or person to be something, (2) to endorse, ratify, sanction, approve or take notice of something or a person, and (3) to take notice of someone in a special way or to honor them" (Inwood, 1992, p. 245).

Acknowledging others, therefore, is deeply relational, though need not be intimate; that is, it does not demand a deep bond between actors but rather a recognition and ratification of their claims as legitimate and valid. As such, it lends itself to the context of social media engagement and hashtag activism. It provides an opportunity to give attention to the others we encounter in our lives and offers an opportunity to communicate care. As Hyde (2006) states, "... the act of acknowledgment is a communicative behavior that grants attention to others and thereby makes room for them in our lives.... people of conscience opt to go out of their way to make us feel wanted and needed, to praise our presence and actions, and thus to acknowledge the worthiness of our existence" (p. 1). Referencing this work, Garlough (2013) notes, "in acknowledgment, there is the potential for healing and hope essential to communal spirit, social activism, and the moral well-being of humankind" (p. 21).

Acknowledging others over social media has the potential to create a network of acknowledgment, in which a diverse array of actors engage in testimony and witnessing around traumatic experiences. Our notion of *networked acknowledgment* occurs when online communities sustain a discourse that allows public testimony about trauma, provides a space for open discussion about claims, highlights common experiences, and affirms faith in the stories of survivors. This concept shares some commonality with Papacharissi's (2016) notion of affective publics. She proposes that in a mediated environment, social media helps connect people and facilitates feelings of engagement, belonging, and solidarity through the formation of affective ties. The connection and disconnection of participants to these affective publics occur through expressions of sentiments. The notion of affective publics was developed to understand the connections of online political movements (e.g., Occupy movement through #ows and protests in Egypt and Greece through #egypt and #ThisIsACoup). We argue that these affective publics enable *networked acknowledgment* in cases of sharing and affirming testimonies about trauma.

Hashtags were initially developed on Twitter to organize information and discussions, but they have become meta-discourses through which people give context, emotions, and meanings to their posts as well as find others gathered to share and discuss the same issues. As a result, the practice of hashtagging may help create these intimate or affective publics by opening up digital spaces where people who use them develop feelings of connectedness and ties through a shared language, emotions, and experiences (Dixon, 2014). As noted above, feminist hashtag activism has been a tactic to gain voice and attention and fight against gender inequalities (Clark, 2016).

Connective Action and Extending #MeToo

One of the characteristics of affective publics is that they lead to connective action but not necessarily to collective action (Papacharissi, 2016). In the context of fragmented and more individualized contemporary societies, Bennett and Segerberg (2012) propose "the logic of connective action" to explain how digital technologies shape social movements, allowing individuals to express interests,

lifestyles, grievances, and engage with issues without having to adhere to a group identity or ideology. They maintain that digital technologies, tied to highly individualized publics, play a crucial role in establishing and organizing actions in contemporary activism. The ongoing #MeToo movement is an illustration of connective action. It did not involve strong, established organizations to coordinate actions. While Tarana Burke's groundwork and Alyssa Milano's popularity certainly played a role in the millions of tweets, retweets, and replies #MeToo generated, this movement was not launched by an established organization. It relied on online interpersonal communication. In other words, the driving force of #MeToo was not an entity but the exchange of individual posts. Bennett and Segerberg (2012) argue that in large-scale connective action formations, personalized missives are key—"the personalization of politics" centers on group identity, membership, or ideology.

This fits the logic of "co-production and sharing based on personalized expression" (Bennett & Segerberg, 2012, p. 16). Personal stories and expressions have a mobilizing power especially through the visibility and accessibility achieved by frequent sharing within social networks (Benkler, 2006). And coupled with personal testimonials are customized hashtags to drive "discourses" among actors (Shah, Culver, Hanna, Macafee, & Yang, 2015). The question remains, however, how #MeToo morphed into dozens of activist submovements, focused on opening a space for conversation about sexual harassment and assault across different institutions (e.g., #churchtoo, #metoomilitary, #mosquemetoo, #metook12), calls for actions to change laws and culture (e.g., #metoocongress, #himthough, #howiwillchange, #nomore, #stoprape), and broader calls to investigate claims, join movements, and call for social and political change.

As an indexing system of the Twitter discourse, hashtags can be used to indicate heightened attention, increased awareness, and the intensity of a particular discourse (Freelon, McIlwain, & Clark, 2016). It can be used strategically—to provide a particular interpretive frame of the issue, to invade other people's discussions through "hashjacking," or to make a tweet go viral. #MeToo movement, like others before it, involves multiple discourses and contending submovements, not all of which aligned with the underlying intent of #MeToo of "empowerment through empathy." Much needs to be unpacked to understand how the logic of connective action has sustained #MeToo over time, how calls for change penetrated different institutions and communities, and how it became significant force across cultural contexts. It is relevant, therefore, to explore these discourses, the actors and themes within them, and their relationship to one another. Our study centers on the predicted relationship between networked acknowledgment and #MeToo activism discourses. We hypothesize:

> **Hypothesis 1:** Overtime changes in networked acknowledgment discourse will predict corresponding changes in #MeToo activism discourse beyond the effects of news events.

We also pose the following four research questions to inform our understanding of this relationship, trace its roots and sources, and consider its robustness against other explanations.

> **Research Question 1:** What temporal patterns mark (a) networked acknowledgment and (b) #MeToo activism discourses?
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> **Research Question 2:** Who are the "opinion leaders" or "hidden influentials" within (a) networked acknowledgment and (b) #MeToo activism discourses?
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> **Research Question 3:** What are prominent themes within (a) networked acknowledgment and (b) #MeToo activism discourses?
>
> **Research Question 4:** Which event features drive the intensity of (a) networked acknowledgment and (b) activism discourses?

Method

Twitter Data

Tweets from October 1, 2017, to February 28, 2018,[2] were initially compiled from an archive that randomly collects 1% of the global Twitter stream. We then used the search strings "metoo," "timesup," "sexual assault*," "sexually assault*", "sexual harass*," "sexually harass*," "sexual molest*," "sexually molest*," "sexual misconduct," "feminism," and "feminist*" to collect tweets about #MeToo and related discourses. After removing irrelevant content and retaining only English tweets, we constructed a data set of 296,387 tweets (see Online Appendix I for details).

Networked acknowledgment. We used part-of-speech tagging and dependency analysis as well as a hashtag-based approach to capture discourse of personal narratives and solidarity, consistent with our conceptualization of networked acknowledgment. First, tweets containing first-person singular pronouns (including possessives such as "I," "my," "me," "mine," and "myself"), in combination with a list of past tense verbs, past participle, and nouns were considered as the personal narratives discourse. The aforementioned list contained assaulted, harassed, abused, raped, assaulter(s), harasser(s), abuser(s), and rapist(s). Using first-person pronouns was essential to identify personal narrative stories; previous studies suggest that first-person singular pronouns are more frequently used in texts of personal upheavals (Chung & Pennebaker, 2011). In addition to the use of the pronouns, tweets narrating personal stories were expected to be written in past tense by using past tense verbs or past participle.

Second, we extracted tweets using bigram combinations with dependencies information. We created a list of nouns that was a direct object of the solidarity-invoking verbs like "believe," "support," "share," and "hear" that frequently appeared in our data set and selected the verb and noun combinations with high relevance to networked acknowledgment. We further included combinations of a possessive adjective ("my" and "our") and "story" (or "stories") to extract tweets surrounding personal narratives. This captured tweets contained phrases like "believe victims," "support survivors," "hear you," and "my story."

We further added tweets by using a hashtag and key word–based approach. Because hashtags are important semantic markers of shareable topics and searchable talks (Zappavigna, 2011), we extracted the most frequently mentioned hashtags appearing in our data set (with a minimum of 10) which yielded about 1,000 hashtags. We then categorized the hashtags based on their meanings, the contexts within which they were used, and their intercorrelation with one another (Shah et al., 2015). We also inductively identified key words relevant to networked acknowledgment. As a result, we added tweets containing the hashtags and key words such as #heforshe, #ibelieveyou, #believewomen, #believesurvivors, #wethepeople, #standup, #ihearyou, #notokay, "speak up," "speak out," and "stand with." This three-step process yielded 9,832 tweets.

Activism. The coding of the activism discourse was constructed using a similar approach. To extract tweets calling for action or social change, we started with a list of modal verbs (e.g., "must," "should," and "can") and their associated verbs that frequently appeared in our data set. We then investigated combinations of a modal verb and associated action verb and selected the ones with high relevance with our activism discourse to capture tweets with phrases like "can change," "should stop," and "must investigate."

We also used bigram combinations with dependencies information. Similar to the approach taken for networked acknowledgment, we first investigated from the list of most frequently used verbs in our data set and selected the ones calling for mobilization and social change: "stop," "end," "change," "join," and "investigate." After examining a list of direct object nouns of these verbs,

we extracted tweets containing certain combinations of a verb and noun such as stop + assault, end + assault, change + culture, join + us, and investigate + claims.

Lastly, we used hashtag categories that called for actions across a range of institutions and allied communities as well as extending the reach of #metoo into different domains. The following hashtags were labeled as "activism" discourse: #mosquemetoo, #churchtoo, #rosearmy, #metoomilitary, #metoocongress, #himthough, #howiwillchange, #nomore, #stoprape. In total, we coded 5,569 tweets as #MeToo activism (see Online Appendix II for a comprehensive description of the two data sets).

Event Data

Events were considered a major #MeToo event if (1) it received attention in at least two of four major news outlets—CNN, Fox News, *New York Times*, and *Wall Street Journal*—that we collected from Media Cloud (https://mediacloud.org/) and/or (2) it was referenced in multiple timelines of the #MeToo movement produced by *Vox*, *The Chicago Tribune*, *the Sydney Morning Herald*, and *Refinery29*. Using this approach, we identified 21 major events between October 2017 and February 2018. This included four events supporting the movement (i.e., *Time Magazine* naming "Silence Breakers" the Person of the Year, the launch of the #TimesUp campaign, the Golden Globes and Oprah Winfrey's Speech, and the Women's March) and 17 major accusations from Harvey Weinstein on October 5, 2017, to Rob Porter on February 6, 2018 (see Online Appendix III for the list of events).

For each of the major accusations, the team of three researchers coded key characteristics using online news sources and judicial proceedings to construct "ground truth" event features:

Occupation of the accused. We coded each of the accused individuals into one of the three major occupational categories of entertainment (which included film, television, comedy, sports, and music), politics (which included national political candidates and elected officials), and journalism (which included all print and broadcast news media), with individuals from fashion, technology, culinary arts, corporate world, judiciary, the arts, or the academy being coded as "other." Two dummy variables were created for inclusion in the models: *entertainment* and *politics*, with individuals occupying these categories coded as 1 and the rest as 0.

Accusation involving minor. We also coded for accusation involving a minor or minors, with event including this element dummy-coded as 1, with all others coded as 0.

Accusation of assault. In addition, accusations involving sexual assault were coded as 1, in contrast with accusations involving sexual harassment or misconduct, which were coded as 0.

Supportive Events. We further added dummy variables for each major event supporting the movement in our time series models (e.g., *Time*'s Silence Breakers).

Analytic Strategy

To answer Research Question 1, we aggregated the number of tweets by day and examined overtime change in the volume and proportion of tweets. To examine Research Question 2 and Research Question 3, we conducted network analysis by first identifying the most retweeted accounts in each discourse and the major drivers of discourses. Then, we extracted the retweeting relationship (i.e., who retweeted whom), visualized the retweet network, and analyzed the most retweeted tweets in
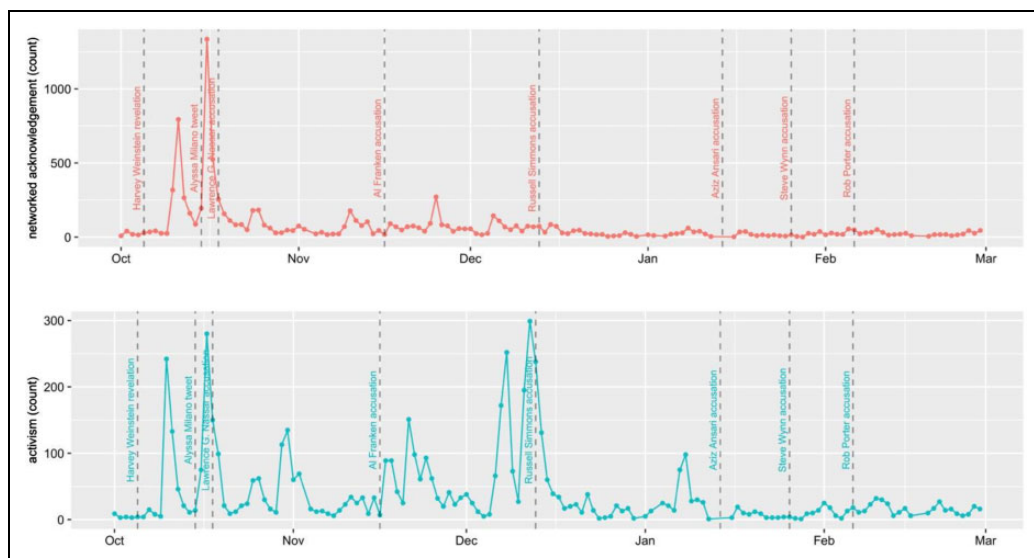
Figure 1. Daily volume of tweets for the networked acknowledgment (above) and activism discourse (below).

both discourses in order to understand the themes running through them. Based on the retweet network analysis, we extracted exemplars that emerged from the data.

To test the research hypothesis and guard against alternative explanations for any observed relationship, we examined Research Question 4 as part of testing the predictive power of networked acknowledgment on #MeToo activism using time series analysis. We estimated time series models (Prais–Winsten) to account for the autocorrelated nature of the Twitter data (see Wells et al., 2016, for a similar analysis). We then ran simultaneous and lagged regressions on the Prais–Winsten residuals in order to determine the effect of event characteristics on the two discourses and their relationship to one another, permitting us to test Hypothesis 1 and answer Research Question 4.[3] All of our analyses—data cleaning, variable construction, network analysis, and time series analysis— were conducted using the R programming language.

Results

Temporal Patterns

Our Research Question 1 asks about the temporal patterns of the networked acknowledgment and #MeToo activism discourses. Figure 1 displays the volume of tweets within each discourse by day, and Figure 2 plots the proportion of tweets by month. The networked acknowledgment discourse peaked in October 2017, which accounted for over half (54%) of all identified tweets in this discourse. The day after Alyssa Milano's tweet encouraging people to share sexual assault or harassment stories, there was an outburst of 1,335 tweets encapsulating tales of traumatic personal experiences and sympathetic responses in our sample. In the ensuing months, although there is a variation in the volume of monthly tweets and small spikes on particular days, such sharing of personal stories and expressing of solidarity gradually waned. However, a different temporal pattern can be observed in the activism discourse, which is marked by punctuated moments of growth throughout the entire period. It started following the accusations of Harvey Weinstein's misconduct being published in the *New York Times*. While October 2017 contained a huge initial spike of tweets calling for action to address sexual harassment and assault, it only makes up 29% of all the tweets
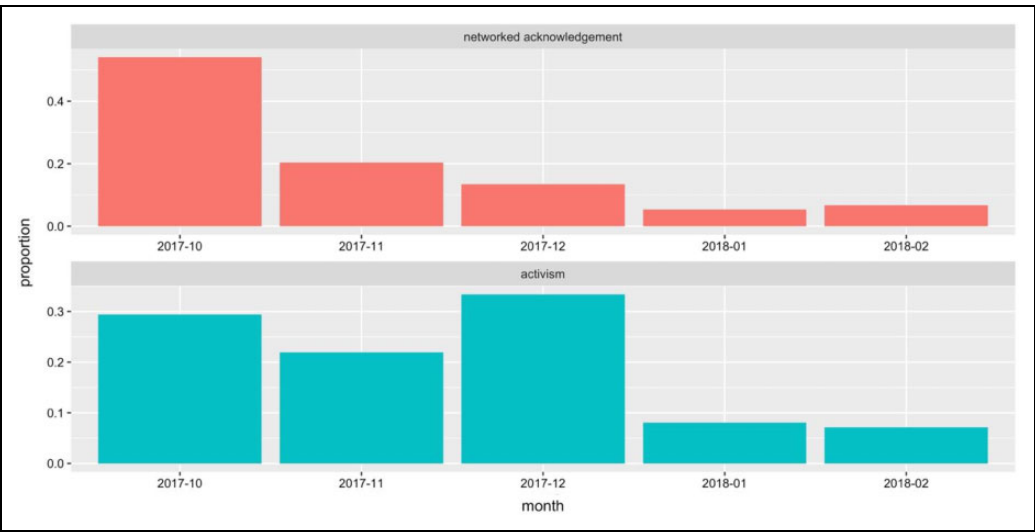
Figure 2. Monthly proportion of tweets for the networked acknowledgment (above) and activism discourse (below).

analyzed during the 5-month period. The highest spike occurred in December 2017, which accounted for 33% of the total activism tweets, with this discourse remaining robust and even growing in the first few months.

Prominent Drivers and Themes of Networked Acknowledgment

Research Question 2 and Research Question 3 ask the major drivers of the networked acknowledgment and activism discourses and the resonant themes within those discourses. In our data, 78% of networked acknowledgment tweets and 85% of activism tweets are retweets of other people's tweets. This suggests identifying the opinion leaders and hidden influentials to understand the major drivers and themes of the two discourses.

In the networked acknowledgment discourse, we identified 27 accounts (i.e., handles) whose tweets were retweeted 30 times or more in total, then classified them into five categories: entertainment (colored in green), media (orange), women's organization (red), liberal activist (violet), and ordinary user (yellow). Among the top 27 accounts, ordinary users make up one third of them (nine accounts), including the most retweeted one, followed by accounts from media (eight), entertainment industries (five), liberal activists (three), and women's organizations (two). The variety of prominent actors whose tweets resonated with Twitter users demonstrates the widespread involvement of people from different sectors of society as well as the broad appeal of the #MeToo movement. While people in media and entertainment played a significant part in bringing societal attention to sexual assault and harassment, the fact that ordinary users' voices were widely heard and shared speaks to the grassroots nature of the networked acknowledgment discourse. Figure 3 displays the retweeting network (who retweeted whom), with the size of nodes proportional to the number of times being retweeted. See Online Appendices IV and VI for details.

Prominent themes associated with these actors centered on personal narratives, breaking silence, and sharing experiences of sexual assault. Some were stories by celebrities, such as singer Alice Glass (@ALICEGLASS) stating, "this is why I had to leave Crystal Castles. here is my story: https://t.co/bs9aJRwgms" with a link directing readers to a personal account. Others were tweets by
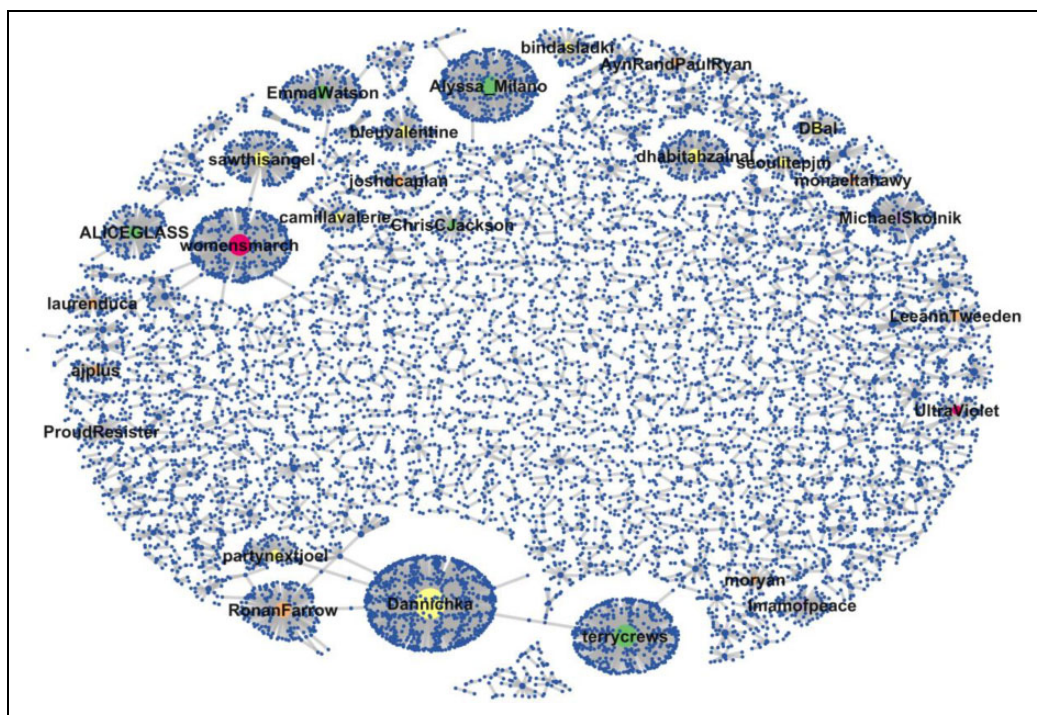
Figure 3. The retweet network of the networked acknowledgment discourse.

ordinary users like "Last night I was sexually assaulted by my Uber driver" (@partynextjoel). Others, including journalists, also participated in the discourse by sharing the stories of others: "In a 10 month investigation, 13 women told me Harvey Weinstein sexually harassed or assaulted them. 3 allege rape" (@RonanFarrow).

Beyond sharing stories and experiences, tweets also revealed attempts to raise awareness about the difficulties of speaking up and sharing personal trauma. The most retweeted post in our data set was by an ordinary user (@Dannichka): "Terry Crews is 6'3 240lbs and he was scared to speak up about his sexual assault. Now ask yourself why a 5'1 125lbs woman wouldn't be scared." This tweet was joined by a wide range of solidarity statements supporting victims: "To all the women sharing stories of sexual assault and sexual harassment, thank you for your bravery to speak up. You are not alone. #MeToo" (@womensmarch) and "If you aren't okay w posting #MeToo, know this: 1. I believe you. 2. You don't have to speak up to be brave. Living in the after is brave" (@bindasladki). The themes of testimony, witnessing, and solidarity run through these network acknowledgment tweets.

Prominent Drivers and Themes of #MeToo Activism

In the activism discourse, 21 accounts were retweeted more than 30 times. We applied the same categories to classifying those accounts. The most retweeted account was a liberal activist, @funder, who is cofounder of the Democratic Coalition, trailed by several accounts from entertainment (e.g., @EmmaWatson, @itsgabrielleu) and media (e.g., @thehill, @jonfavs). Overall, the entertainment (eight) and media accounts (eight) made up a majority of the top most retweeted accounts, while two liberal activists, two women's organization accounts, and one ordinary user made the top list. It is clear that the activism discourse was led mainly by elite actors, a sharp contrast with the networked
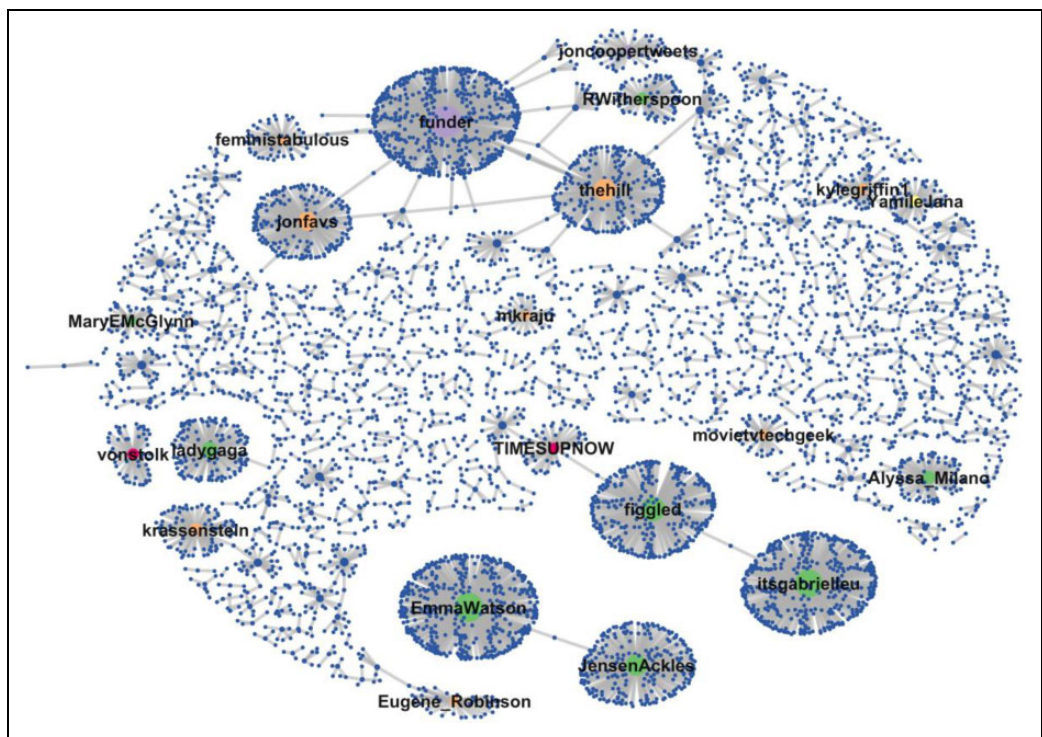
Figure 4. The retweet network of the activism discourse.

acknowledgment discourse, in which ordinary users accounted for a third in the top most retweeted handles. See Online Appendices V and VII for details.

Figure 4 plots the retweet relationships observed in the activism discourse. Nodes retweeted 30 times or more are colored by category and sized by the times of being retweeted. One prominent theme in the activism discourse was advocating for broader cultural and social change, going beyond efforts to raise awareness of the prevalence of sexual assaults and harassments: "I stand with all the women who have been sexually harassed, and am awestruck by their bravery. This mistreatment of women has to stop" (@EmmaWatson) and "Sexual harassment is REAL and can cost you your life!!! This shit must end!!!" (@itsgabrielleu). These calls to stop the mistreatment of women and address a misogynic culture, along with showing support and solidarity toward the victims, reflect the most basic form of #MeToo activism.

Calling for change often involved men, explicitly calling them out or demanding action. For example, several tweets ask for men to engage in ongoing discussions about sexual violence, to think critically about their role in perpetuating rape culture, and to break the sexist norm: *"MEN: We ALL have a responsibility to end sexual assault. Start with our SONS. Teach them how to be REAL men, and NO means NO"* (@mmpadellan) and "Guys, it's our turn. After yesterday's endless #MeToo stories of women being abused, assaulted and harassed, today we say #HowIWillChange" (@mrbenjaminlaw). While a majority of tweets called for social change regarding sexual violence, other frequently shared tweets revealed attempts to bring attention to political leaders, asking for legal reforms, and investigations of alleged accusations.

Along these lines, there was a huge volume of tweets about investigating President Donald Trump. That 5 of 10 among the top most retweeted tweets were about allegations against Trump shows the magnitude of such attempts, "Donald Trump should resign over these NINETEEN

Table 1. Simultaneous Prais–Winsten Regression Models Predicting Discourse Volume.

Predictors	Networked Acknowledgment	Activism (1)	Activism (2)
Occupation of accused			
Celebrity	−28.233 (57.139)	−6.166 (19.683)	−6.364 (19.082)
Politician	26.443 (66.254)	62.335** (22.822)	62.168** (22.126)
Minor victim	15.394 (84.847)	36.801 (29.227)	32.587 (28.367)
Nature of accusation (sexual assault = 1)	−8.191 (70.775)	−23.637 (24.380)	−21.755 (23.643)
Events			
Golden Globes	−18.182 (124.335)	53.704 (42.829)	56.665 (41.533)
Time Magazine	3.658 (124.335)	48.473 (42.829)	45.1446 (41.536)
Time's Up	−24.526 (124.335)	−9.700 (42.829)	−5.753 (41.542)
Women's March	−34.224 (124.335)	−5.527 (42.829)	−1.115 (41.546)
Networked acknowledgment			0.0774** (0.027)
Constant	1.646 (10.831)	−1.519 (3.731)	−6.704 (3.978)
Adjusted R^2	−.053	.0264	.085

Note. Standard errors are in parentheses.
*p < .05. **p < .01. ***p < .001.

credible sexual assault allegations, and no elected Democrat should be afraid to say that." (@jon-favs) and "@realDonaldTrump- You should resign for your sexual misconduct. Anyone who disagrees with that statement condones your actions & is calling 24 women liars[. . .]" (@funder), are typical examples, among others.

Other tweets pushed for recognition of sexual violence within various social institutions and called for efforts to expand the boundaries of organizing efforts beyond sharing personal stories and expressing empathy. For example, @YamileJana's post reads: "#MeTooMilitary #ItsTime We realize the importance of our voices when we're silenced [. . .]," quoting Malala Yousafzai's famous statement in her speech to the UN to call for action against harassment and assault in the armed forces. Similarly, other widely circulated tweets referred to the prevalence of sexual violence in religious settings: "There's a hashtag on Twitter right now called #churchtoo where people are sharing their stories of sexual harassment" (@mattmikalatos). Calls to actions—whether broadly about changing culture, about men changing their behavior, or about accountability from politicians and institutions—run through the #MeToo activism messages.

Time Series Analysis

To test our focal hypothesis and address Research Question 4, we first conducted Granger causality tests on the networked acknowledgment and activism discourse to structure our models. Granger causality tests can be used to examine whether the past values of one variable are related to the current or future values of another variable. On a 1-day lag, the results of Wald tests revealed that networked acknowledgment discourse Granger caused the intensity of activism discourse, $\chi^2 = 12.65$, $p < .001$, but not vice versa, $\chi^2 = 1.34$, $p > .05$. While this does not demonstrate that one discourse *caused* subsequent changes in the other, it suggests the past values or information contained in the networked acknowledgment discourse is related to changes in the activism discourse, adding a predictive power for the activism discourse beyond its past values.[4]

Accordingly, we ran a series of linear regressions on the residuals obtained from Prais–Winsten modeling for the networked acknowledgment and activism discourses, using the event features as predictors (Table 1). The third column of Table 1 includes networked acknowledgment as an

Table 2. One-Day Lagged Prais–Winsten Regression Models Predicting Discourse Volume.

	Networked Acknowledgment	Activism (1)	Activism (2)
Occupation of accused			
Celebrity	−4.384 (57.173)	11.827 (19.390)	12.066 (18.807)
Politician	21.995 (66.294)	42.490[†] (22.483)	40.744[†] (21.814)
Minor victim	39.801 (84.898)	45.146 (28.793)	40.094 (27.974)
Nature of accusation (sexual assault = 1)	−31.539 (70.817)	−24.287 (24.018)	−20.986 (23.319)
Events			
Golden Globes	12.159 (124.409)	39.603 (42.193)	40.104 (40.924)
Time Magazine	−19.774 (124.409)	119.257** (42.193)	119.152** (40.924)
Time's Up	−31.432 (124.409)	1.424 (42.193)	2.867 (40.947)
Women's March	−24.474 (124.409)	−9.821 (42.193)	−5.833 (40.944)
Networked acknowledgment		0.076** (0.024)	
Constant	0.840 (10.838)	−2.737 (3.676)	−7.862* (3.927)
Adjusted R^2	−.054	.055	.111

Note. Standard errors are in parentheses.
[†]$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

additional predictor of the activism discourse after accounting for event features. Since there might be a potential delay between the event of accusation and the corresponding social media response, Table 2 reports 1-day lagged regressions.

Results for networked acknowledgment in Tables 1 and 2 indicate that none of the event features were significant predictors for the networked acknowledgment discourse. In other words, the networked acknowledgment discourse progressed irrespective of the specific characteristics of the high-profile cases of sexual assault and harassment which drove media's attention. On the other hand, the accused being a politician positively predicted activism discourse, suggesting that political figures like Roy Moore, Al Franken, and Donald Trump became a focal point of calls for action. The lagged models indicate that *Time Magazine* naming "Silence Breakers" the Person of the Year was an event that positively predicted the activism discourse on the following day. More importantly, the networked acknowledgment discourse was positively tied with the intensity of activism discourse in both the simultaneous and 1-day lagged models, providing strong support for the core research hypothesis.

Discussion

This study examined the temporal dynamics and network characteristics of two key discourses surrounding the hashtag activism that became the #MeToo movement. Our analysis focused on *networked acknowledgment*, the web of connections created when online communities (a) sustain discourse that facilitates public testimony about trauma, (b) offer a space for open discussion about claims, (c) highlight common experiences, and (d) affirm faith in the stories of survivors to build "empowerment through empathy." Our data reveal that people from a variety of backgrounds, from celebrities to ordinary users, participated in networked acknowledgment around #MeToo, exposing the prevalence of sexual assault and sexual abuse and building a sense of shared experience and identity. People exhibited "activism" throughout, by encouraging #MeToo accounting for different individuals, communities, institutions, and the broader culture. Our study linked these two discourses. Using time series analysis—Granger causality tests and simultaneous and lagged Prais–

Winsten regressions—we find that the network acknowledgment discourse sustained and drove the #MeToo activism discourse.

The prominence of ordinary users in the networked acknowledgment discourse further demonstrates the grassroots nature of sharing personal narratives and expressing social solidarity. This pattern of diffusion increased the chances of the politicized and ideological contestations that quickly circulated around #MeToo. Political actors, especially from the left, inserted their own agenda into activism discourses, revealing political sentiments in the organizing efforts against sexual violence. Our retweet network analysis and time series result suggest that accusations against politicians, in particular, drove the magnitude of #MeToo activism discourse.

Our results also revealed that overtime, networked acknowledgment waned while activism discourse was more sustained. The outpouring of empathy and solidarity, as evidenced by a huge proportion of the tweets in October 2017, suggests that the formation of "affective publics" through the expressions of sentiments (Papacharissi, 2016) enabled a network of acknowledgment, where people found a space to provide public testimony about their trauma, share experiences, and receive acknowledgment. This discourse decreased in intensity over time while the activism discourse became more prevalent, suggesting the lasting power of activism.

Also, networked acknowledgment was not significantly driven by any event features, suggesting that this discourse was spurred through interpersonal online networks connected with a topical relationship (Maier, Waldherr, Miltner, Jähnichen, & Pfetsch, 2018), as opposed to being driven by high-profile accusations which received widespread media attention. This, in turn, implies that the creation of intimate and affective publics was sustained by networked acknowledgment, where people share their own experiences, grievances, and emotions and gain a sense of acknowledgment, not by catalyzing events, the features of the accusations, or activist discourses.

More importantly, our analysis shows that the networked acknowledgment discourse drove activism discourse, testifying to the potential of the personal and the private transforming into organizing attempts that are public calls to actions. In a sense, this result provides important insight into how communicative actions happening in the networked public sphere possibly motivate more sustainable political actions. The personal became political, with activism spurred by discourses of networked acknowledgment beyond its response to political events.

Questions remain, though, whether this type of connective action, amplified through online networks, technological affordances, and personalized communications, would lead to more organized, formal collective action off-line. While a recent meta-analysis documents that the effects of digital technologies on civic and political participations have been increasing over time (Boulianne, 2018), other studies on hashtag activism or clicktivism criticize its limited consequences for social change (Karpf, 2012). Our study of the #MeToo movement provides more support for the view that hashtag activism can be consequential for different communities and institutions. Examples include the dismissal of Harvey Weinstein, the resignation of Al Franken, the defeat of Roy Moore, and the termination of many celebrities. By one count, over 200 prominent men who were accused of sexual crime have lost their jobs after allegations surfaced (Carlsen et al., 2018), evidence that #MeToo movement's reach extends well beyond the interactions among publics in the networked social sphere, and certainly well beyond Twitter.

Indeed, the #MeToo has been prevalent on multiple platforms besides Twitter. On Facebook, the hashtag was used by more than 4.7 million people in 12 million posts during the first 24 hr. These practices also sparked interest across the globe, such that around 30% of #MeToo tweets are in other languages (Anderson & Toor, 2018). More than 2.3 million #MeToo tweets were shared across 85 countries in the first month of the campaign. In a sense, given the international development and different efforts stemming out from the #MeToo, future research using multiplatform and international data encompassing the relevant discourses will be able to provide a fuller picture of the phenomenon. Our findings are especially important given the ongoing sexual violence and

misogyny in our society. We demonstrate how networked publics respond to this by exchanging empathy, building solidarity, and shaping organizing efforts to move forward. By using a triangulation of different methodological approaches, we not only identified the nature of discourses but also showed how their ebbs and flows were motivated.

Authors' Note

All codes, search parameters, coded content, and sample tweets for data replication can be obtained from the lead author (Jiyoun Suk: jsuk2@wisc.edu). While the raw data gathered and archived using the Twitter API are not permitted under Twitter's developer policies, the Online Appendix contains detailed information to construct the data set. All of our analyses—data cleaning, variable construction, network analysis, and time series analysis—were conducted using the R programming language.

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Notes

1. Our study's time frame is from October 2017 to February 2018, and it should be noted that Twitter's character limit has increased from 140 to 280 in November 2017.
2. We consider the first 5 months to be vital in the #MeToo movement as most of the major accusations and events (e.g., *Time*'s Person of the Year and Golden Globes Awards) concentrated during that time frame, yielding a high-volume social media responses.
3. The volume of discourse on a particular day can generally be attributed to two factors. First is the *events* occurring on that day (or on the previous day), which is the question (Research Question 4) that we intend to explore. Second is the *volume* of the discourse from the previous day(s), which is "autocorrelation," and the time series analysis employed in this article is to account for this factor. Through time series analysis, we first want to control for the change in discourse volume on a particular day because of its volume on the previous day and only then estimate the effects of the events on the volume of discourse on that particular day. More specifically, we used Prais–Winsten models for each of our regressions, which involve fitting at autoregressive (1) model to the time series of the volume of discourse, followed by running simultaneous and lagged regressions on the residuals obtained from the autoregressive (1) fit.
4. Our vector autoregression analysis before the Granger causality test revealed the one lag had the lowest Bayesian information criterion score.

Supplemental Material

Supplemental material for this article is available online.

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