



Seeking Visibility in a Big Tent: Digital Communication and the People’s Climate March

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The September 2014 “People’s Climate March” was reportedly the largest climate change mobilization in history. The coalition of organizations behind the march chose a strategy of inclusion: They sought to create a “big tent” for a climate movement. Building on theoretical developments in the literature on digital media and social movements, we used Twitter as a window to observe how march organizers and participants attempted to (a) create a digital space of shared attention intersecting with the on-the-ground event, and also (b) thread together diverse orientations to the climate issue.

Keywords: climate change, Twitter, protest, social movements

The September 2014 “People’s Climate March” was reportedly the largest climate mobilization in history (Dastagir, 2014). Nearly 400,000 protesters marched in New York City, and additional rallies were held in 160 countries around the world. As noted in *The New York Times*, “the march was a self-consciously inclusive affair, with the organizers intent on creating a very big tent” (Foderaro, 2014). The website of the march organizers—representing a coalition of more than 1,500 organizations, led by

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350.org—offered tools to visitors to help find themselves within the broader movement (<http://peoplesclimate.org>). Visitors could click a button to choose “How do you identify?” (Quakers, vegans, skaters, indigenous peoples, etc.) or “What do you care about?” (bees, anticapitalism, fracking, science, etc.). These communication strategies are outward signs of how climate organizations are responding to a broader shift in the structure of social movements, from a focus on *collective action*, in which organizations seek to sustain long-term action by reinforcing shared group identity and developing shared issue frames, toward embracing a logic of *connective action*, in which organizations foster more personalized involvement and communication among loosely connected networks of individuals (Bennett & Segerberg, 2013).

This shift toward increased diversity in the communication strategies of social movement organizations is of particular relevance to climate activism. The climate issue is characterized by fragmented, loosely connected debates among a diverse array of stakeholders and multiple, often competing frames for defining what a climate movement could be (Cox, 2012; Giddens, 2009). Our case study of the use of social media in the People’s Climate March brings this tension to the forefront of analysis: How can contemporary climate movements both create a “big tent” with room for personalized action frames—that is, allow entry points for multiple concerns and constituencies—and create sufficient coherence within the movement to be impactful? The march is a particularly good case for analysis of this tension because of the organizers’ explicit strategy of appealing to a diverse array of climate activists.

Building on theoretical developments in the literature on digital media and social movements, we investigated how Twitter was used by march organizers and participants in an attempt to (a) create a communicative big tent—a digital space of shared attention intersecting with the on-the-ground event in which a diverse array of orientations to the climate movement could gain wider visibility—and also to (b) thread together diverse orientations to the climate issue into a coherent conversation. Overall, our findings suggest that the march organizers and participants together succeeded in creating a space of shared visibility for multiple orientations to the climate issue online by centralizing the discussion around a small collection of widely used Twitter hashtags. However, we also identified missed opportunities to build connections, or at least a shared vocabulary, across those points of view.

Literature Review

The rise of digital communication has been accompanied by transformations both in how individuals relate to social issues and in the structures of organizations working to enact change. Individuals are now less likely than in previous eras to take up institutionalized forms of political action and less likely to become long-term members of social change organizations (Bennett, 2003). Politics has become more individualized, such that citizens are taking up more personalized orientations to civic practice (Bennett & Segerberg, 2013; Thorson, 2014). Social change organizations are transforming in response. Traditional membership organizations continue to exist, but new organizational forms are proliferating—in particular, those that make use of digital media to develop more flexible, entrepreneurial relationships with their constituents (Bimber, Flanagin, & Stohl, 2012; Hestres, 2015; Takahashi, Edwards, Roberts, & Duan, 2015). In the area of the climate issue, new “Internet-mediated advocacy organizations” (Karpf, 2012) have emerged to take advantage of the mobilizing potentials of digital

communication tools, some focused exclusively on climate (e.g., 350.org) and others that focus on multiple issues, including climate, as part of a broader agenda (e.g., UniteBlue). At the same time, traditional groups such as the Sierra Club and World Wildlife Fund have added digital forms of organizing to their existing strategic repertoires. Chadwick (2007) describes these phenomena as the rise of organizational hybridity.

Bennett and Segerberg (2012, 2013) explore the impact of this shift in their work theorizing an emerging logic of connective action. They propose that the organizational capacities of digital communication technologies can help to sustain social movements even in the absence of shared identities and agreed-upon collective action frames. This is a challenge to social movement scholars who have emphasized the need for the development of frame alignment between individual participants and social movement organizations if a movement is to succeed (Benford & Snow, 1992). In the case of what they call “organizationally enabled” connective action, Bennett and Segerberg use examples from recent protest actions to show how networks form around loose coalitions of movement organizations that, in turn, create space for a diverse array of individuals to “find themselves” in the movement. What can hold movements like these together, they argue, is the widespread sharing of personalized action frames across digital and social media networks. The spreadability of personalized frames takes the place of frame alignment as a way to ensure movement continuity.

There is a tension between creating a big-tent movement that is inclusive of myriad issue framings—a route to attract a broader array of participants—and developing sufficient coherence to attract favorable media attention and bring about broader policy change over the long term (Bennett & Segerberg, 2012; Tarrow, 1994). This raises an empirical challenge for scholars of contemporary social movements: to decipher when an organizationally enabled connective action movement is “chaotic and unproductive and when it attains higher levels of focus and sustained engagement over time” (Bennett & Segerberg, 2012, p. 761). One window into questions of this nature is to examine the role of social media in the movement (Agarwal, Bennett, Johnson, & Walker, 2014; Choi & Park, 2014).

Social Media and the Problem of Public Attention

To build connections across personalized orientations within a broader social movement, there must be a way to make a multitude of personal frames visible to one another. Without such a mechanism, there is little possibility that frames could spread or become meaningfully connected. Protests on the ground can serve this purpose if they succeed in bringing together a wide array of participants and garner attention from the news media. Social networking sites provide an additional opportunity to make personalized frames visible and connect participants together. Bennett and Segerberg (2012) suggest that organizationally enabled forms of connective action, such as the People’s Climate March, are characterized by loose-knit coalitions of nongovernmental organizations and other organizations coming together to create the “networking backbone” for an event. The challenge for these coalitions is not only to mobilize supporters to attend the protest on the ground, but also to develop an online space to aggregate public attention to the action.

The scarcity of attentional resources is an age-old problem for social change organizations. Thrall, Stecula, and Sweet (2014) found that social media have done little to ameliorate that problem. They studied more than 250 human rights nongovernmental organizations and found that almost none were able to muster substantial public attention to their causes on social media: Failure was the more likely outcome of social media campaigns. In the case of Twitter, one way of creating a space of shared attention and (potential) visibility is through the use of hashtags. Hashtags are keywords accompanied by a hash symbol (#) that can serve, among other functions, to coordinate tweets on a shared topic. Shared hashtags can emerge spontaneously and be crowdsourced into importance (becoming more widely shared after a grassroots beginning) or can become popular because they are sponsored by organizations or other elites as part of a broader campaign (Bruns & Burgess, 2011; Meraz & Papacharissi, 2013).

We draw on Webster's (2011) theory of the duality of public attention to conceptualize a movement hashtag as a structure that can aggregate public attention online. In the case of an organizationally enabled protest action, a movement hashtag can be seen as a cocreation of both the sponsoring organizations as well as the Twitter users who participate through the act of using the hashtag. If the hashtag is widely used rather than ignored, it becomes a site for aggregating public attention to the issue. This is similar to the notion of "ad hoc publics" created by hashtag communities (Bruns & Burgess, 2011), but we wish to avoid the connotation that a public is brought into being spontaneously solely through the agency of Twitter users. Instead, following Webster, we emphasize the role of organizations in promoting the hashtag, as well as the actions of Twitter users.

In practice, the existence of a space of shared public attention on social media can be—and often is—measured by the sponsoring organization(s) using metrics of volume (Kanter & Paine, 2012): how many people used the hashtag in their tweets. We can also measure the vitality of a shared space by considering its centrality to the overall conversation—that is, from a network perspective, how important a particular hashtag is in linking disparate people who are referencing an issue online. Streams of content organized by a hashtag become easily searchable for Twitter users, and the most popular hashtags can come to be associated with a movement or an event. Kalmeijer (2014) refers to these as the "common vocabulary" of a movement. The valuable resource of shared attention that these streams provide serves to create greater visibility for a relevant tweet, while also making the stream open to "hijacking" by nonrelated users (e.g., pornographic Twitter accounts used the #peopleclimate hashtag) and by "wave riders," topically related organizations or actors who wish to steer attention on the issue toward their specific organization (Bode, Hanna, Yang, & Shah, 2015; Christensen, 2013). It is also common practice to use multiple hashtags in a single tweet, a practice that allows Twitter users to create symbolic connections between ideas, frames, and geographic locations relevant to the movement.

The use of hashtags tends to follow a power law, such that very few hashtags are used frequently (the common vocabulary), whereas many others are used only occasionally. In the case of an organizationally sponsored hashtag, whether the hashtag comes to prominence depends on the sponsoring organization's activities to promote it as well as who uses it. Hashtags that are sponsored and/or used by prominent actors (i.e., "influencers" with large numbers of followers or central network position) are more likely to reach a high volume of usage. In this way, the status of users within a Twitter topic and the prominence of hashtags are deeply intertwined. Meraz and Papacharissi (2013) theorize this

phenomenon as the intersection of networked gatekeeping and networked framing and propose that, analytically, hashtags can serve as rough indicators of distinct framings of an issue (Bonilla & Rosa, 2015; Meraz & Papacharissi, 2013).

As the term is used in the social movements literature, *framing* a movement is a strategic process through which movement participants create a shared understanding of an issue that is necessary to mobilize action (Benford & Snow, 2000; Entman, 2003). Although theorists of connective action argue that frame alignment—getting everyone to agree on a particular movement frame—may not be necessary for digitally enabled social movements, they do suggest that personal action frames must be visible to the wider movement and have sufficient interconnections so that a movement can achieve coherence. In practice, thinking specifically of Twitter as an organizing platform, success of this kind might look like (a) a popular big-tent hashtag (b) used by a diverse array of movement stakeholders that contains (c) meaningfully interconnected clusters of widely visible personalized frames.

The People's Climate March

The above theoretical discussion is particularly useful in discussing the emergence (and possibility for sustaining) a climate movement. Among the varied challenges of mobilization around climate change is the difficulty of organizing across multiple stakeholders who orient to the issue through very different frames and come from diverse constituencies (Cox, 2012). Scholars studying the effects of climate change communication have built an impressive array of data about which frames are more or less effective in changing attitudes or mobilizing behavioral change (e.g., Hart, 2011; Schuldt & Roh, 2014). Macro-level analyses, however, suggest that public discussion around climate change remains fragmented, with multiple orientations to climate competing for precedence and relatively low levels of public attention (Cox, 2012; Giddens, 2009).

"To change everything, we need everyone" was one of the slogans from the People's Climate March. The march foregrounded the diversity of orientations to the climate issue and built it into the DNA of the protest. The organizers developed an inclusive strategy both online and offline. As mentioned above, visitors to the website were invited to find a place for themselves in the march by choosing from a lengthy drop-down list of orientations to the movement. These orientations—loose categories that could account for multiple movement framings—were translated to the on-the-ground structure of the march: For example, those identifying as part of "frontline communities" and focused on an injustice frame were invited to start their march at Eighth Avenue and 66th Street, those whose personal framings of the action focused on science were asked to meet at Eighth Avenue and 81st Street, under the banner "The Debate Is Over," and so on. The schematic for the march offered six different broad categories through which participants could orient to the march.

The organizers also explicitly hoped that the protest would offer a way to knit together these multiple framings:

Today's climate movement is different from the one of decades past, and we want to make sure the People's Climate March tells the story of today's climate movement. To make that happen, we're trying something new and arranging the contingents of the march in a way that helps us thread our many messages together. (People's Climate, 2014)

Their goal, therefore, was to use a flexible approach to framing the march as a way to build interconnections among the fragmented stakeholders associated with the climate movement. Previous research on 350.org (one of the organizations leading the People's Climate coalition) revealed that weaving together distinct orientations to climate change has long been a priority for the organization. Hestres (2014) quotes a 350.org staff member who said of its strategy to target people who are already concerned about the effects of climate change, "Yes, there's an issue of preaching to the choir, but imagine if you could have the choir all singing from the same song sheet" (p. 330). Getting the choir to sing in harmony is viewed as a necessary step in achieving a climate movement.

In what follows, we examine tweets about climate in the days surrounding the march to explore the tensions between organizers' inclusive strategy for the movement and the challenge of building connections across diverse orientations to climate change, amplifying personal action frames to enhance visibility, and broadening the common vocabulary for the movement. Our study was guided by the following research questions:

- RQ1: To what extent did organizers succeed in sponsoring a digital space of shared attention for the People's Climate March?*
- RQ2: To what extent was the Twitter conversation about the march reflective of the explicit big-tent strategy of organizing in terms of who was mentioned most frequently and the topics they tweeted about?*
- RQ3: How did organizations and individual activists of different types negotiate the need to promote a big tent with a desire to highlight their specific agenda and build interconnections among activists?*

Method

We conducted a keyword search of Twitter for the term *climate* the day before, the day of, and the day after the climate change march (September 20–22, 2014). We searched the public API every 15 minutes during this time period. In total, there were 107,745 tweets in the data collection.

We used a mixed method approach to investigate our research questions. First, we looked at the frequencies of hashtags used each day of the protest. Second, we conducted a content analysis to classify a random sample of the 600 most mentioned users in the data set. *Mentioning* is a Twitter practice whereby one user can include the name of another user in her tweet. The frequency with which a user is mentioned is a common proxy measure for influence in the conversation (Cha, Haddadi, Benevenuto, &

Gummadi, 2010). Third, we looked at networks of hashtag co-occurrence as a way to explore how march participants built connections between their personal orientations to the climate issue and the broader conversation about the march. Finally, we conducted qualitative analyses of the Twitter feeds of four central actors in the march. Each of these methods is briefly detailed below.

The hashtag and mention frequency data were generated using a Python script (available for download via GitHub [Wang, 2016]) that analyzed each day of the Twitter corpus to produce lists of the most frequently used hashtags and the most mentioned usernames. The most frequently used hashtags and mentioned users are discussed below and reported in Table 1 and Figure 1. To investigate the diversity of actors within the climate discussion, we coded 212 Twitter users randomly selected from among the top-600 most mentioned during the three days of the analysis period. In developing our codebook for mentioned actors, we built on previous work classifying actors in instances of political mobilization (Freelon & Karpf, 2015; Lotan, Graeff, Ananny, Gaffney, & Pearce, 2011; detailed coding instructions available on request). To test intercoder reliability, five coders employed the codebook on 20% of the sample, obtaining a Krippendorff's alpha of .79. A single coder classified the remainder of the sample.

We used a semantic network approach to look at hashtag co-occurrence patterns.¹ Hashtag co-occurrence is when two hashtags or more appear together within the same tweet. For example, the tweet "@INMSittingBull: How the #PeoplesClimate March Became a Corporate PR Campaign <http://t.co/oN8508nzR8> #NDN #FloodWallStreet #Fracking" contains co-occurrence links among #peoplesclimate, #ndn, #floodwallstreet, and #fracking. This tweet served to create connections between the People's Climate March and streams of Twitter discussion about Native Americans (#ndn), a separate "floodwallstreet" protest focused on the role of the financial industry in climate change, and the issue of fracking. Each co-occurrence in this tweet becomes a tie between nodes in the network; the network map created by those ties across the data set provides a sense of the interconnections among topics in a Twitter conversation (Anderson, Binsbergen, & Vieira, n.d.).

To address RQ3, we gathered a complete set of tweets posted by three organizations and one individual activist (350.org, Sierra Club, UniteBlue, Mark Ruffalo). These four qualitative case studies were selected as exemplars of the various types of actors involved in the march. The first two organizations we selected for analysis were part of the event organizing coalition. Sierra Club, an environmental organization in existence since 1892 that currently focuses on a clean energy economy, represents a traditional movement organization; 350.org, an online organization founded in 2007 and devoted to "building a global climate movement," represents one of the new, Internet-mediated organizations

¹ Before identifying hashtag co-occurrence frequencies, we used DiscoverText to clean the data set and remove exact duplicate tweets. A Python script was used to retrieve hashtag pairs and their aggregate frequencies. A symmetrical link between hashtag *i* and hashtag *j* was established by linking them on the basis of their frequencies of co-occurrence on each day in the period of analysis. For the convenience of semantic network analysis, the co-occurrence network data was further dichotomized into presence (coded as 1) and absence (coded as 0). We ran the data through NodeXL to compute basic indicators of network configuration (see Table 2).

described by Karpf (2012). The actor Mark Ruffalo represents what Freelon and Karpf (2015) call a *bridging elite*, a celebrity whose following comes mostly from his role as an entertainer, but who can pull attention to political issues through his communications. Finally, we chose UniteBlue, a progressive community that started on Twitter, whose core mission is to “connect, empower and amplify the American Left.” Similar to the MoveOn model, UniteBlue represents a multi-issue, Internet-mediated interest organization (Carty, 2011).

Results

Our first research question asked whether march organizers succeeded in sponsoring a digital space of shared attention for the climate change march. A look at the frequencies of hashtag use suggests that the answer is yes. Of all the posts about climate during this three-day period, the hashtag sponsored by the organizing committee (*#peoplesclimate*) was the most frequently used. A plurality of other hashtags in the top-15 most mentioned were versions of this organizationally sponsored hashtag, including, for example, *#peopleclimate*, *#climatemarch*, *#climate2014*. These shared space in the frequency list with longstanding hashtags used to talk about climate on Twitter, such as *#climate* and *#climatechange* (Kirilenko & Stepchenkova, 2014). The focus of attention on *#peoplesclimate* was particularly pronounced on the day of the march.

We next considered to what extent the space of attention to the march could be seen as a big tent, including a diverse array of actors. The coded sample of top-mentioned actors suggests that many different types of Twitter users were present in the discussion (see Figure 1). We expected advocacy groups involved in the coalition and the news media to be present—and they were—but we also found nearly equal proportions of individual activists, individual journalists, celebrities, and governmental actors. This is an indicator that the march organizers were successful in mobilizing a relatively open space of shared attention to the protest.

We used a hashtag co-occurrence analysis to explore what topics were talked about in the march and to begin to unpack the differences between the shared vocabulary of the march (e.g., *#peoplesclimate*) and the long tail of less frequently used hashtags that represented (in a rough proxy) the presence of personalized frames. Network descriptives are reported in Table 2. Figure 2 illustrates the network structure of hashtag co-occurrences on the day of the march. The large nodes at the center represent the most central hashtags (or the hashtags with the highest degree centrality) in the network: *#climate* and *#peoplesclimate*. To illustrate their importance, *#peoplesclimate* alone was connected with one quarter of all the nodes in the network, meaning that the hashtag co-occurred with 25% of all the other hashtags in the network. This is additional evidence that march organizers successfully steered the climate discussion online toward their organizationally sponsored hashtags. However, two other elements of the network are also worth observing. First, there was a substantial periphery around the core of tweets focused on the march. This periphery comprised climate-related tweets that did not have any connection to, and therefore were invisible to, the main stream of tweets about the march. No hashtags in this periphery co-occurred with any of the march-related hashtags.

Table 1. Top 15-Hashtags in the Sample.

September 20		September 21		September 22	
Hashtag	Total	Hashtag	Total	Hashtag	Total
Peoplesclimate	2,538	Peoplesclimate	11,507	PeoplesClimate	2,407
Climate	2,406	climate	4,435	ClimateOfDenial	2,125
ClimateMarch	835	climatemarch	2,616	climate	1,967
climatechange	763	climate2014	1,309	climatemarch	1,095
climate2014	634	ClimateChange	1,160	FloodWallStreet	979
Porn	358	peoplesclimatemarch	1,121	Climatechange	895
exhibitionist	357	PeopleClimateMarch	880	Climate2014	635
Nsfw	357	auspol	869	PeopleClimateMarch	521
PeoplesClimateMarch	351	fortheloveof	753	ActOnClimate	373
Auspol	324	NYC	546	News	335
FloodWallStreet	285	news	467	PeoplesClimateMarch	324
walkthewalk	248	WalkTheWalk	436	uniteblue	324
ActOnClimate	230	RT	400	tcot	300
NYC	175	PCM	369	auspol	239
CWNYC	151	actonclimate	348	nyc	221

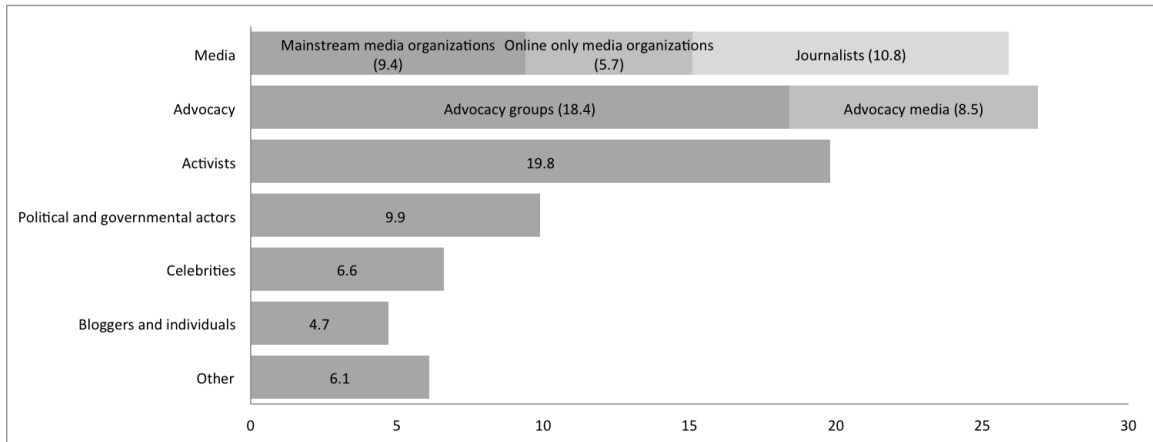


Figure 1. Most mentioned Twitter users (September 20–22), coded for actor types (percentages).

Table 2. Indicators of the Hashtag Co-occurrence Network Configuration.

Date	Network size	Group degree centralization (%)	Density	Clustering coefficient (C)
September 20 Frequency	1,885	35.74	0.003	.823
September 21 Frequency	3,020	31.06	0.002	.824
September 22 Frequency	2,124	28.2%	0.003	.832

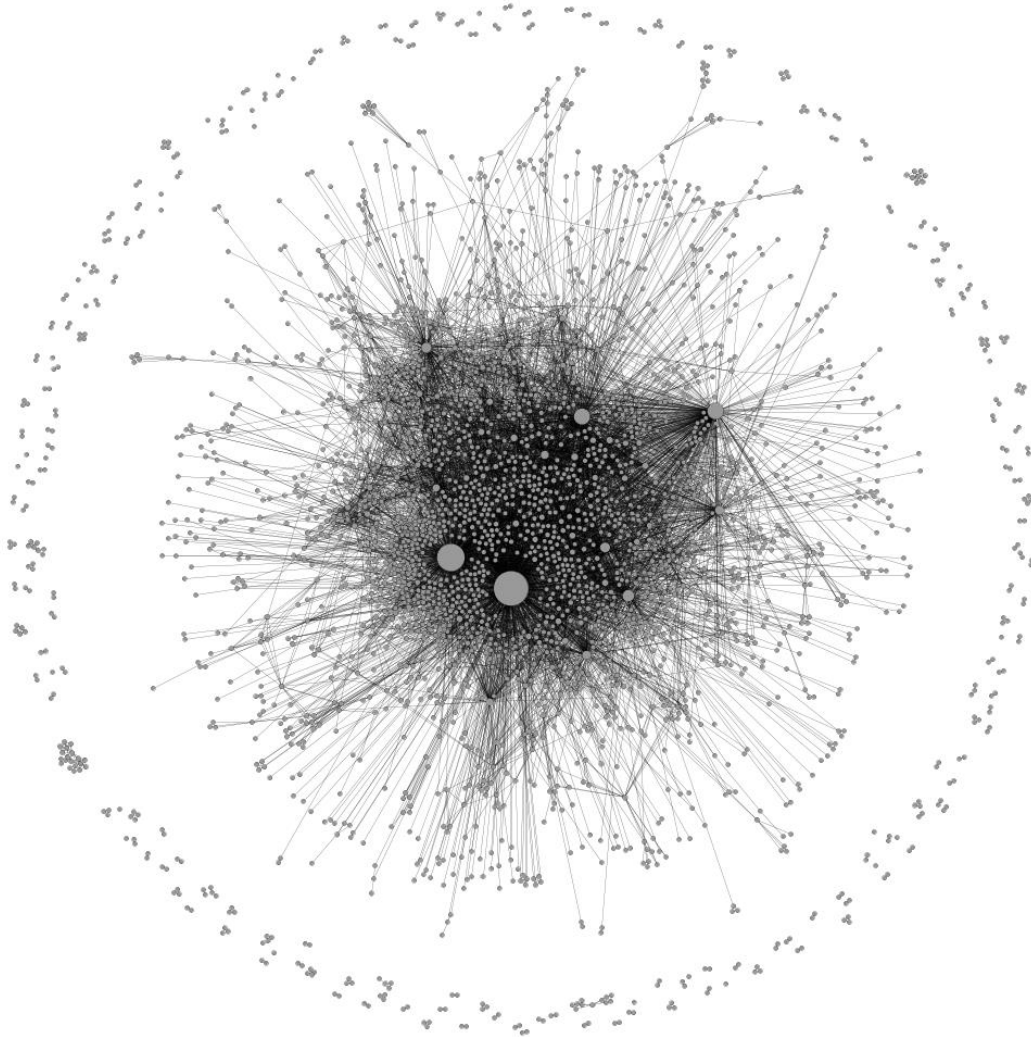


Figure 2. A visualization of the hashtag co-occurrence network for September 21 with tie strength of edges of at least one. Made using Gephi. The two nodes at the bottom of the central mass represent the #climate and #peoplesclimate hashtags.

The second finding of note is better illustrated in Figure 3. This figure contains a version of the co-occurrence network including only those co-occurrences that appeared in the data more than 20 times (less than 1% of all ties). Here, we see again the tight connections between the #climate and #peoplesclimate hashtags, but we also begin to see how Twitter users made use of those hashtags to create visibility for their own orientations to the march. For example, users tweeting about #tarsands made their concern about this issue more widely visible to the public assembled around the march by including the #peoplesclimate hashtag in multiple tweets. Figure 3 shows only the most prominent acts of association. The full data set was dominated by this practice (see Figure 2) of using hashtags to connect personal orientations to climate to this more visible stream. Yet, we found little evidence of a common Twitter vocabulary forming to thread together these diverse personalized framings on the march: More than 95% of hashtag co-occurrences appeared only once in the data. The networks of hashtag co-occurrence suggest a Twitter corpus characterized by individualized insertions competing for visibility.

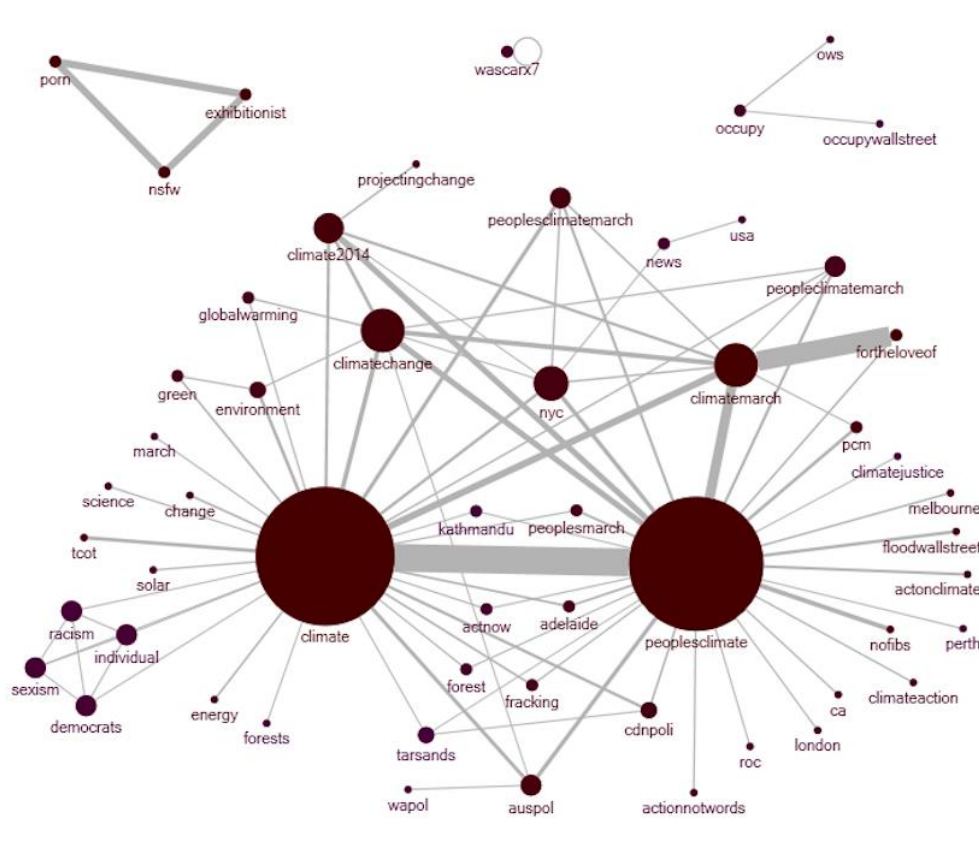


Figure 3. A visualization of the hashtag co-occurrence network for September 21 with tie strength of edges being at least 20 times. Made using NodeXL.

Tweeting Practices During the People's Climate March

Our third research question asked how organizations and individual activists of different types balanced the need to promote a big-tent mobilization with a desire to highlight their specific agenda. As Bonilla & Rosa (2015) note in their study of #Ferguson, "hashtags offer a window to peep through, but it is only by stepping through that window and 'following' (in both Twitter and non-Twitter terms) individual users that we can begin to place tweets within a broader context" (p. 7). Our focus in the case analysis was to observe at a micro level the practices that helped to explain the broader structures we observed above. We focused on whether and how each organization/individual used hashtags to take part in—and to strategically direct—the online conversation and drew on the mentioning and retweeting affordances of Twitter to amplify the visibility of other users and frames; we also looked at other indicators that revealed their orientation to the big-tent framing of the march.

Table 3 provides a summary of tweets from each of the four accounts. Several differences are readily apparent. Nearly all of the tweets from Sierra Club and 350.org were "broadcasts" from the organization, as opposed to retweeting content from others. Mark Ruffalo and UniteBlue were more likely to retweet, suggesting a more interactive approach. The four cases also varied substantially in terms of their use of the march-sponsored hashtags. More than 80% of tweets from 350.org used one of the seven most prominent hashtags connected to the march. Sierra Club tweets were similar. In contrast, Mark Ruffalo used a wider variety of hashtags, and UniteBlue emphasized a narrow array of hashtags that (as we describe below) served to direct attention to their own campaign on the climate issue.

Organizing the Big Tent: Sierra Club and 350.org

A number of scholars have observed that the forms of advocacy organizations are undergoing broad changes in response to opportunities opened by digital media, in many cases becoming more entrepreneurial, more nimble, and more flexible (Bimber et al., 2012; Karpf, 2012). 350.org falls into this category of Internet-mediated political advocacy: It is a single-issue organization, focused exclusively on mobilizations around global climate change (Hestres, 2014). In terms of its history, Sierra Club could not be more different from 350.org: It is the oldest "legacy" environmental organization in existence. Despite these differences in their origins, Hestres (2015) found that both organizations mobilize concerned citizens through grassroots online campaigns, although they may differ in their audience targeting and some of their strategies.

Research on the role of new media in contemporary activism suggests that online-savvy organizations use social media to engage with participants, creating dialogic communication rather than simply adhering to a broadcast model (Briones, Kuch, Liu, & Jin, 2011; Lovejoy & Saxton, 2012). We expected 350.org in its connective role as leading the coalition to use more dialogic communication through practices of retweeting (amplifying a message posted by someone else) or mentioning other users. Yet, the data in Table 3 reveal that this was not the case. Fewer than 10% of tweets from either of these organizations were retweets. They were also less likely to mention other users than the other cases—and most of the mentions (especially for 350.org) were self-referential, mentioning affiliates (350 Asia and 350 Australia).

Instead, the focus of both organizations was on promoting the march as the big tent for a climate movement. They did so by using the march-sponsored hashtags and they did so in the content of their tweets. 350.org emphasized the global nature of the big tent (a strategy in alignment with their organizational goals). Their tweets linked to images from London, Ho Chi Minh City, New York City, Melbourne, and more. Sierra Club tweets focused exclusively on the New York City march, emphasizing “we are all in this together.” They explicitly drew connections to labor unions (“Big labor is here”), age diversity (“All generations represented at the #PeoplesClimate March!”), geographic inclusion (“Women representing Zambia call for climate action #PeoplesClimate”), and intergroup involvement (“Musicians, artists, and faith groups march along 6th Ave #PeoplesClimate”).

Table 3. Hashtag Analysis for Case Studies.

Variable	350.org	Sierra Club	UniteBlue	Mark Ruffalo
Total tweets, <i>n</i>	83	98	67	40
Original (not retweets), <i>n</i>	78	91	47	29
Original tweets, %	94	93	70	72.5
Tweets using #PeoplesClimate, <i>n</i>	66	63	1	5
Tweets using #peoplesclimate, %	80	64	1	12.5
Tweets using big-tent hashtags, <i>n</i>	68	70	7	13
Tweets using big-tent hashtags, %	82	71	10	32.5
Top hashtags	peoplesclimate FloodWallStreet FossilFree ActionNotWords	peoplesclimate Actonclimate peoplesclimatemarch	UniteBlue Climateofdenial Libcrib	peopleclimatemarch PeoplesClimate Renewable
Most mentioned users	pmharper kellydent AYCC 350Australia	Sierraclub bruneski NYTimes	laureldavilacpa bannerite	markruffalo KrapelsMarco LeoDiCaprio WaterDefense
Tweets with link, <i>n</i>	25	33	26	16
Tweets including a link, %	30	34	39	40

Note. Hashtag under big tents means the following hashtags: #climate, #climatechange, #peoplesclimate, #climatemarch, #climate2014, #peoplesclimatemarch, and #peopleclimatemarch.

On the day of the march, both organizations focused on “live tweeting.” According to Papacharissi and de Fatima Oliveira (2012), Twitter can serve as a news-breaking tool, especially when users “live tweet” events as they unfold (see also Hermida, 2010). Tweets from Sierra Club described the New York City premarch rally, a moment of silence that occurred at the start of the march, and the progression of the march (“Marching through Times Square—You can’t miss us!”). The live-tweeting posts serve dual audiences: organizing those participating in the march and informing those who are following the march from afar.

Threading Connections: Mark Ruffalo

Hollywood actor Mark Ruffalo has been a prominent activist in the climate issue since 2008 (Schwartz, 2012) and he was a central figure in the People’s Climate March. His presence was noted in press communications from the march organizers and reporters who were offered interviews with Ruffalo on the day of the march. His presence was equally felt online. Ruffalo was one of the most mentioned Twitter users on the day of the march and the day after. His Twitter practices make him distinct among our cases: True to the role we expected of a bridging elite (Freelon & Karpf, 2012), Ruffalo was not broadcasting; he was building connections.

Ruffalo posted on Twitter less frequently than our case study organizations (see Table 3). Only a few of his tweets were broadcast-style invitations to participate in the march (e.g., “If you’re in the NY area, be a part of something amazing. Join the Peoples Climate March today!” with a link to <http://peoplesclimate.org>). Instead, his posting was characterized by creating connections among various stakeholders and prominent framings in the climate movement and, arguably, connecting the center of the climate march conversation—activists—to a broader audience of interested observers.

One indication for this is Ruffalo’s use of hashtags. He used the big-tent hashtags (#PeoplesClimate, #PeopleClimateMarch) as well as hashtags relating to more specific issues within the movement (#renewables), including fracking, which is Ruffalo’s “pet cause” (#BanFrackingNow, #NoFracking). Ruffalo’s connector role is also indicated by his frequent retweeting of other users, a function he used much more often than the organizations we examined. Ruffalo’s tweets also frequently mentioned other users, both prominent activists and “ordinary” people. For example, on the day of the march, activists who marched with Ruffalo tweeted “at” him, and Ruffalo retweeted those messages. This act of retweeting gave those activists broader visibility by bringing their message to Ruffalo’s larger base of followers.

Ruffalo’s connecting also went beyond existing climate change activists to pull in ordinary individuals, including those who follow him on Twitter not because of his activism but because he is a celebrity. An example is Ruffalo’s Twitter exchange with @traveljenn, who asked, “What the heck is #Fracking @MarkRuffalo?” Ruffalo replied with a link to *Gasland*, a documentary focusing on communities affected by fracking. Twitter user @traveljenn is obviously not a climate change expert, and she probably follows Ruffalo for entertainment-related reasons, but Ruffalo’s connective practices can help pull users like her into the conversation, creating linkages between popular culture engagement and civic and political spaces. Boykoff and Goodman (2009) argue that, in many ways, the entry of celebrities into the

climate change conversation has democratized this space, making this abstract issue more “close to home” for many individuals. On the other hand, the “hero” quality of celebrities may make the solutions they offer too individualized, encouraging people to focus on individual action rather than adoption of wider public policies. Ruffalo, in some ways, goes against this model. Interacting directly with individuals through Twitter, he suggests a mode of engagement that offers ways to become engaged through existing organizations. In this way, Ruffalo acts as a connector between the periphery and the center of the climate change conversation, as well as with those who are outside of the climate conversation altogether.

Riding the Climate Change Wave: UniteBlue

UniteBlue is an organization that pursues a broad, progressive agenda. Like 350.org, it is an Internet-mediated organization, but unlike 350.org, UniteBlue is an issue generalist. In this, it is similar to MoveOn (Carty, 2011) and other organizations that build advocacy campaigns around a diverse array of issues and mobilize their “members” to action (membership in UniteBlue is achieved by tweeting at the organization). Multi-issue organizations such as UniteBlue engage in “headline chasing” as a key strategy (Karpf, 2012; Hestres, 2014), “the practice of building advocacy campaigns around issues or topics that are receiving significant media attention at a particular time” (Hestres, 2014, p. 325). That is just how UniteBlue connected with the People’s Climate March.

The day before the march, UniteBlue did not tweet about climate at all, but rather posted several standard “welcome messages” to new members (“@9kittens Welcome! You are a Verified Member of #UniteBlue”) and retweeted posts about campaign finance, the repeal of the Don’t Ask Don’t Tell policy, and the Texas gubernatorial race. It was only on the day of the march that it turned its focus to the issue of climate change, and it did so from an “outsider” position. UniteBlue was the least likely among our cases to append a big-tent hashtag to its tweets. The majority of UniteBlue’s Twitter activity on the days surrounding the march was devoted to connecting the climate change issue to the progressive movement and highlighting the incompetence of the conservative movement, but without making specific connections to People’s Climate. Instead, UniteBlue attempted to use the resource of attention to climate spurred by the march and turn it toward the organization. It promoted the hashtag #ClimateOfDenial in an attempt to strategically direct heightened attention to climate change toward its partisan framing of the issue.

On the day of the march, UniteBlue aimed to have the hashtag “trend” on Twitter. One post read, “TWITTERBOMB! #ClimateOfDenial #ClimateOfDenial #ClimateOfDenial #ClimateOfDenial.” About one hour later, another tweet announced that #ClimateOfDenial was trending in the United States and urged followers to “make it #1!” Nearly half of UniteBlue’s 67 posts over the three-day period included this hashtag. By the day after the march, #ClimateOfDenial had become the second most frequently used hashtag in the climate discussion on Twitter.

Discussion

This multimethod investigation of the Twitter conversation around the 2014 People’s Climate March adds to our empirical understanding of the challenges faced by social change organizations under conditions of connective action. At the center of this challenge is the tension between embracing the logic

of connective action by working in coalition with other organizations and welcoming myriad personalized action frames (Bennett & Segerberg, 2012)—there is room for everyone at the climate march—and the desire to thread together distinct constituencies into a coherent movement, that is, to “have the choir all singing from the same song sheet” (Hestres, 2014, p. 330). We expect this tension to become common across issue movements as groups such as 350.org, UniteBlue, Sierra Club, and many others experiment with “hybrid organizational repertoires” (Chadwick, 2007) with their grassroots mobilizing activities sometimes looking more in line with the logic of collective action and other times working within the logic of connective action.

Our analyses highlight this tension by looking at how march organizers and interested publics together created a shared space of attention to the climate issue on Twitter. We argue that the coalition of organizations behind the People’s Climate March were successful in sponsoring a shared digital space of attention to the march. We see this first in terms of the high volume of usage for march-related hashtags. The hashtags promoted by the organizing coalition were the most frequently used hashtags among Twitter users who posted about the climate issue during this time period. We see it second in the centrality of the #peoplesclimate hashtag to the network of hashtags used to talk about climate. Our network visualizations of hashtag co-occurrences demonstrate that Twitter conversation about climate over the three days was highly centralized on use of the #peoplesclimate hashtag. We suggest that the promotion of this hashtag by the march organizers set into motion the construction of a shared space of attention to the march. On the one hand, the success of the hashtag can be understood as an accomplishment of strategic communication: The organizers actively promoted use of the hashtag for weeks before the march, but success in attracting usage was by no means guaranteed. As Webster’s (2011) theory of the duality of public attention reminds us, the emergence of public attention on Twitter with the #peoplesclimate hashtag was a cocreation of the march organizers and the Twitter users whose posts brought the hashtag stream to life in high volumes.

The result of this successful mobilization of public attention to the march on Twitter was the creation of an opportunity for multiple personalized framings of the climate issue to be made visible to one another, a precondition for building bridges across distinct orientations to climate. The coding of the most mentioned Twitter users in the data suggests that the climate conversation over those three days attracted a diverse array of users. Our network visualizations of hashtag co-occurrences suggest that many activists used the #peoplesclimate hashtag to link their personal orientation to the climate issue (e.g., #fracking, #tarsands, #science) to the broader stream of conversation about the march. This coordination of public attention to a topic—bringing together a more diverse array of participants and ideas than the usual follower/following structures of Twitter allow—is not the only way that hashtags are used on Twitter (Bruns & Burgess, 2011), but it is an important one. In the case of #peoplesclimate, the hashtag should be understood as a co-creation of the People’s Climate organizing coalition and Twitter users who were attracted to the resource of attention the hashtag could provide.

However, our data do not provide indication that the Twitter conversation around the march helped to build bridges across personalized framings of the climate issue. The network visualizations (see Figures 2 and 3) show that aside from the most central hashtags, there was little in the way of common vocabulary for talking about particularized concerns linked to the broader climate movement. Instead, we

might characterize the collection of Twitter posts about climate as a large, but fragmented conversation, held together perhaps only temporarily by shared use of hashtags such as #peoplesclimate. These findings prompt us to ask, How should we think about these big-tent discussion spaces as forms of publics? boyd (2010) proposes that shared attention spaces on social media should be conceptualized as “networked publics”; Bruns and Burgess (2011) propose that “ad hoc” publics are facilitated by shared hashtag use; Bode and colleagues (2015) write about “overlapping public spheres” in their study of partisan political hashtags. These concepts are ripe for further explication. Important to this explication will be theory and empirical research to help us understand to what extent conversations in these shared digital spaces can be expected to be fragmented, what practices knit together publics over the long term, and how social change organizations should conceive of their roles in these spaces that they themselves often sponsor (in the sense that the march organizers sponsored #peoplesclimate).

We addressed the latter two questions with our qualitative analysis of four Twitter accounts that participated in the posts related to the climate march. Our case selections were based on existing typologies of Twitter users and of distinct organizational repertoires (Freelon & Karpf, 2015; Karpf, 2012). We saw evidence that the organizations involved in the People’s Climate coalition—in our data, 350.org and Sierra Club—used their Twitter communications to amplify the big-tent strategy, each in its own way. Yet, these organizations made very little effort to link to other participants and threads of conversation online. Instead of their broadcast-only use of Twitter, we could imagine a social media strategy that would identify actors representing different factions in the movement and reach out to them by using the retweet and mention functionality of Twitter (Briones et al., 2011; Lovejoy & Saxton, 2012). That neither of these organizations used such an approach came as something of a surprise, particularly given Hestres’ (2015) findings that both 350.org and Sierra Club emphasize mobilization of the digital grassroots as part of their organization-wide strategy. On the other hand, Mark Ruffalo, our bridging elite, who tweeted much less during the three-day study period, managed to more effectively play a connecting role than 350.org and Sierra Club.

Our analysis of UniteBlue’s use of Twitter revealed a different approach to the use of the Twitter attention mustered by the climate march. As a multi-issue organization, UniteBlue is positioned on the “fringe” of the climate issue. It treated the aggregated attention to climate on Twitter as a resource, promoting its own hashtag to emphasize a specific partisan orientation to the climate issue (a critique of conservative politicians). Notably, the climate change issue disappeared from the UniteBlue Twitter feed in the days after the march. It moved on to other issues and other streams of attention. A question for empirical research is whether and to what extent “wave-riding” organizations such as these create a challenge for the coherence of developing social movements (Christensen, 2013).

On the methodological front, our study points to the question, how do you “see” a social movement online? More specifically, how do different methods open different “windows” on a Twitter conversation, and how do these methodological choices shape what we find? Our approach in this article focused on data collected by a keyword search for the term *climate*. We did so to capture a wider array of dynamics than we might have seen if we had focused solely on tweets to the main event hashtag #peoplesclimate. If, for example, we had focused only on #peoplesclimate, we would have missed the importance of cases such as UniteBlue, which only occasionally used these hashtags, and we would have

seen a much thinner slice of the participation of actors such as Mark Ruffalo. We also would have had a more difficult time seeing how central the #peoplesclimate hashtag was for the overall Twitter discussion of climate during this time period. Moreover, focusing only on the central hashtags might have painted a picture of much more coherence in terms of how people tweeted about the march, and that picture might be misleading. On the other hand, looking exclusively at tweets from the #peoplesclimate hashtag might have given us greater insight into the emotional rhythms of the hashtag stream (Papacharissi, 2014).

This single-case analysis is of course limited by its lack of generalizability. Following previous research, we conceived of the People's Climate March as a "focusing event," in which attention is drawn to an issue and opportunities are opened up for organization building (Merry, 2014). As such, the next steps in this research will be to explore how the shape and content of the conversations around this event might have impacted online conversations on climate change going forward. Research designs of that kind would also allow us to tease out the broader effects of the micro-level practices we observed in our cases.

References

- Agarwal, S. D., Bennett, W. L., Johnson, C. N., & Walker, S. (2014). A model of crowd enabled organization: Theory and methods for understanding the role of Twitter in the occupy protests. *International Journal of Communication, 8*, 646–672.
- Anderson, P., Binsbergen, J., & Vieira, N. (n.d.). *A Twitter analysis of the Obamacare debate* (New Media Methods Report). Amsterdam, The Netherlands: University of Amsterdam. Retrieved from https://www.nvisionanalytics.com/wp/wp-content/uploads/2015/04/A_Twitter_Analysis_of_the_Obamacare_Debate.pdf
- Benford, R. D., & Snow, D. A. (1992). Master frames and cycles of protest. In A. D. Morris & C. M. Mueller (Eds.), *Frontiers in social movement theory* (pp. 133–155). New Haven, CT: Yale University Press.
- Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology, 26*, 611–639. doi:10.1146/annurev.soc.26.1.611
- Bennett, W. (2003). Communicating global activism. *Information, Communication & Society, 6*(2), 143–168. doi:10.1080/1369118032000093860a
- Bennett, W. L., & Segerberg, A. (2012). The logic of connective action: Digital media and the personalization of contentious politics. *Information, Communication & Society, 15*(5), 739–768. doi:10.1080/1369118X.2012.670661
- Bennett, W. L., & Segerberg, A. (2013). *The logic of connective action: Digital media and the personalization of contentious politics*. New York, NY: Cambridge University Press.

- Bimber, B., Flanagin, A., & Stohl, C. (2012). *Collective action in organizations: Interaction and engagement in an era of technological change*. New York, NY: Cambridge University Press.
- Bode, L., Hanna, A., Yang, J., & Shah, D. V. (2015). Candidate networks, citizen clusters, and political expression strategic hashtag use in the 2010 midterms. *The ANNALS of the American Academy of Political and Social Science*, 659(1), 149–165. doi:10.1177/0002716214563923
- Bonilla, Y., & Rosa, J. (2015). #Ferguson: Digital protest, hashtag ethnography, and the racial politics of social media in the United States. *American Ethnologist*, 42(1), 4–17. doi:10.1111/amet.12112
- boyd, d. (2010). Social network sites as networked publics: Affordances, dynamics, and implications. In Z. Papacharissi (Ed.), *Networked self: Identity, community, and culture on social network sites* (pp. 39–58). New York, NY: Routledge.
- Boykoff, M. T., & Goodman, M. K. (2009). Conspicuous redemption? Reflections on the promises and perils of the “celebritization” of climate change. *Geoforum*, 40(3), 395–406. doi:10.1016/j.geoforum.2008.04.006
- Briones, R. L., Kuch, B., Liu, B. F., & Jin, Y. (2011). Keeping up with the digital age: How the American Red Cross uses social media to build relationships. *Public Relations Review*, 37(1), 37–43. doi:10.1016/j.pubrev.2010.12.006
- Bruns, A., & Burgess, J. E. (2011, August). The use of Twitter hashtags in the formation of ad hoc publics. In *Proceedings of the 6th European Consortium for Political Research (ECPR) General Conference 2011*, University of Iceland, Reykjavik.
- Carty, V. (2011). Multi-issue, Internet-mediated interest organizations and their implications for U.S. politics: A case of MoveOn.org. *Social Movement Studies*, 10(3), 265–282. doi:10.1080/14742837.2011.590029
- Cha, M., Haddadi, H., Benevenuto, F., & Gummadi, P. K. (2010). Measuring user influence in Twitter: The million follower fallacy. In W. W. Cohen & S. Gosling (Eds.), *Proceedings of the fourth International AAAI Conference on Weblogs and Social Media* (pp. 10–17). Menlo Park, CA: AAAI Press.
- Chadwick, A. (2007). Digital network repertoires and organizational hybridity. *Political Communication*, 24(3), 283–301. doi:10.1080/10584600701471666
- Choi, S., & Park, H. W. (2014). An exploratory approach to a Twitter-based community centered on a political goal in South Korea: Who organized it, what they shared, and how they acted. *New Media & Society*, 16(1), 129–148. doi:10.1177/1461444813487956

Christensen, C. (2013). Wave-riding and hashtag-jumping: Twitter, minority "third parties" and the 2012 US elections. *Information, Communication & Society*, 16(5), 646–666.

doi:10.1080/1369118X.2013.783609

Cox, R. (2012). *Environmental communication and the public sphere*. Los Angeles, CA: SAGE Publications.

Dastagir, A. E. (2014, September 22). "Largest-ever" climate-change march rolls through NYC. *USA Today*. Retrieved from <http://www.usatoday.com/story/news/nation/2014/09/21/nyc-climate-change-march/16008009/>

Entman, R. M. (2003). Cascading activation: Contesting the White House's frame after 9/11. *Political Communication*, 20(4), 415–432. doi:10.1080/10584600390244176

Foderaro, L. W. (2014, September 21). Taking a call for climate change to the streets. *The New York Times*. Retrieved from http://www.nytimes.com/2014/09/22/nyregion/new-york-city-climate-change-march.html?_r=0

Freelon, D., & Karpf, D. (2015). Of big birds and bayonets: Hybrid Twitter interactivity in the 2012 presidential debates. *Information, Communication & Society*, 18(4), 390–406.

doi:10.1080/1369118X.2014.952659

Giddens, A. (2009). *The politics of climate change*. Malden, MA: Polity Press.

Hart, P. S. (2011). One or many? The influence of episodic and thematic climate change frames on policy preferences and individual behavior change. *Science Communication*, 33(1), 28–51.

doi:10.1177/1075547010366400

Hermida, A. (2010). Twittering the news: The emergence of ambient journalism. *Journalism Practice*, 4(3), 297–308. doi:10.1080/17512781003640703

Hestres, L. E. (2014). Preaching to the choir: Internet-mediated advocacy, issue public mobilization, and climate change. *New Media & Society*, 16(2), 323–339. doi:10.1177/1461444813480361

Hestres, L. E. (2015). Climate change advocacy online: Theories of change, target audiences, and online strategy. *Environmental Politics*, 24(2), 193–211. doi:10.1080/09644016.2015.992600

Kalmeijer, J. (2014). *Hashtag clustering to summarize the topics discussed by Dutch members of Parliament*. Leiden, Germany: Centre for Innovation, Leiden University. Retrieved from <http://apps.centre4innovation.org/twitteranalytics/twitter-project/report.pdf>

Kanter, B., & Paine, K. (2012). *Measuring the networked nonprofit*. San Francisco, CA: Wiley.

- Karpf, D. (2012). *The MoveOn effect: The unexpected transformation of American political advocacy*. New York, NY: Oxford University Press.
- Kirilenko, A. P., & Stepchenkova, S. O. (2014). Public microblogging on climate change: One year of Twitter worldwide. *Global Environmental Change*, 26, 171–182. doi:10.1016/j.gloenvcha.2014.02.008
- Lotan, G., Graeff, E., Ananny, M., Gaffney, D., & Pearce, I. (2011). The Arab Spring| The revolutions were tweeted: Information flows during the 2011 Tunisian and Egyptian revolutions. *International Journal of Communication*, 5, 1375–1405.
- Lovejoy, K., & Saxton, G. D. (2012). Information, community, and action: How nonprofit organizations use social media. *Journal of Computer-Mediated Communication*, 17(3), 337–353. doi:10.1111/j.1083-6101.2012.01576.x
- Meraz, S., & Papacharissi, Z. (2013). Networked gatekeeping and networked framing on #Egypt. *The International Journal of Press/Politics*, 18(2), 138–166. doi:10.1177/1940161212474472
- Merry, M. K. (2014). Broadcast versus interaction: Environmental groups' use of Twitter. *Journal of Information Technology & Politics*, 11(3), 329–344.
- Papacharissi, Z. (2014). *Affective publics: Sentiment, technology, and politics*. New York, NY: Oxford University Press.
- Papacharissi, Z., & de Fatima Oliveira, M. (2012). Affective news and networked publics: The rhythms of news storytelling on #Egypt. *Journal of Communication*, 62(2), 266–282. doi:10.1111/j.1460-2466.2012.01630.x
- People's Climate. (2014). Retrieved from <http://2014.peoplesclimate.org/lineup>
- Schuldt, J. P., & Roh, S. (2014). Media frames and cognitive accessibility: What do "global warming" and "climate change" evoke in partisan minds? *Environmental Communication*, 8(4), 529–548. doi:10.1080/17524032.2014.909510
- Schwartz, J. (2012, September 2). Fracklash. *New York Magazine*. Retrieved from <http://nymag.com/news/intelligencer/topic/fracking-2012-9/>
- Takahashi, B., Edwards, G., Roberts, J. T., & Duan, R. (2015). Exploring the use of online platforms for climate change policy and public engagement by NGOs in Latin America. *Environmental Communication*, 9(2), 228–247. doi:10.1080/17524032.2014.1001764
- Tarrow, S. (1994). *Power in movement: Social movements, collective action and politics*. Cambridge, UK: Cambridge University Press.

Thrall, A. T., Stecula, D., & Sweet, D. (2014). May we have your attention please? Human-rights NGOs and the problem of global communication. *The International Journal of Press/Politics*, 19(2), 135–159. doi:10.1177/1940161213519132

Thorson, K. (2014). Sampling from the civic buffet: Youth, new media, and do-it-yourself citizenship. In H. Gil de Zuniga (Ed.), *New technologies and civic engagement: New agendas in communication series* (pp. 3–22). New York, NY: Routledge.

Wang, L. (2016). *Python script for extracting mentioned accounts and hashtags from Excel spreadsheet of Twitter data*. Retrieved from https://github.com/lupingwa/Climate-Change-Project/blob/master/mention_hashtag

Webster, J. G. (2011). The duality of media: A structurational theory of public attention. *Communication Theory*, 21(1), 43–66. doi:10.1111/j.1468-2885.2010.01375.x