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Chapter 3:

Building Protest Online: Engagement With the Digitally Networked #not1more Protest Campaign on Twitter[4]

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4 This chapter appeared as: van Haperen, Sander, Walter Nicholls, and Justus Uitermark. 2018. "Building Protest Online: Engagement with the Digitally Networked #not1more Protest Campaign on Twitter." Social Movement Studies 17(4).

Abstract

This chapter examines engagement with digitally networked, politically contentious actions. Maintaining engagement over time is a key challenge for social movements attempting to network digitally. This chapter argues that proximity serves as a condition to address this challenge, because it configures the personal networks upon which transmission depends. This is a paradox of digital activism: it has the capacity to transcend barriers, however proximity is essential for sustaining relations over time. Examining Twitter data from the #not1more protest campaign against immigrant deportations in the United States, quantitative and social network analyses show a differentiated development of engagement, which results in a particular geographical configuration with the following attributes. First, there is a robust and connected backbone of core organizers and activists located in particular major cities. Second, local groups engage with the campaign with direct actions in other cities. Third, a large and transitory contingent of geographically dispersed users direct attention to the campaign. We conclude by elaborating how this geographically differentiated configuration helps to sustain engagement with digitally networked action.

Introduction

Los Angeles-based organizers launched a social media campaign in 2013 to forge a broad nationwide coalition of immigrant rights activists, unions, and other organizations in the struggle against the deportation of undocumented migrants: the #not1more campaign. The campaign was designed to facilitate open participation and digital networking, so that anyone could adopt and adapt the campaign message to personal circumstances (Franco, Loewe, and Unzueta, 2015). With little top-down command, participants could contribute to the campaign as desired, for example to organize local direct actions using its slogan and imagery. Using the hashtag, information about such actions could then be shared with the growing network to spread the campaign message online to others and inspire new actions. Social media can be used to create and share content, helping to spread information far and wide, fast. In the #not1more campaign, digital media were used to share information, support, slogans and tactical repertoires through personal relations, in an increasingly broad nationwide network. It was, in other words, a digitally networked campaign (Bennett and Segerberg, 2012).

Initially a small group of organizers used Twitter as a tool to connect with activists across the nation using unifying slogans and symbolism. Over the course of 20 months, the campaign became widely endorsed in immigration rights struggles, tying in closely with direct actions such as rallies, sit-ins, and blockades of detention centres across the nation. Eventually, wide-spread engagement with the #not1more campaign contributed to a push for immigration reform leading up to controversial executive action by President Obama on November 20, 2014, providing administrative relief for up to 4.9 million immigrants (Nicholls, Uitermark, and van Haperen, 2016; "United States Department of Homeland Security: Executive Actions on Immigration," 2015). Employing a strategy of digital networking, the campaign developed a coalition that was durable enough to push for substantial policy impact.

A key challenge in digitally networked action is to sustain engagement over longer periods of time (Bennett and Segerberg, 2012, pp. 760–761; Tufekci, 2017). Engagement with digital action can take many forms. In the case of the #not1more campaign, organizers sought attention for a particular frame: Not one more deportation. Social media allow for the sharing and adaptation of this frame through personal networks. The #not1more organizers intended to connect action in the highly fragmented field of immigration advocacy by employing a similar

logic: casting "a broader public engagement net using interactive digital media and easy-to-personalize action themes, often deploying batteries of social technologies to help citizens spread the word over their personal networks" (Bennett and Segerberg, 2012, p. 742). Bennett and Segerberg suggest that sustained engagement with digitally networked action depends on the transmission mechanisms which enable the sharing of action frames through personal networks (2012, p. 754). When transmission mechanisms fail, frames are not shared through personal networks, and connective action breaks down. This chapter therefore discusses and analyses such transmission in more detail.

We suggest that the configuration of personal networks may be conducive or limiting to transmission mechanisms. The structural configuration of networks shapes transmission dynamics (Watts and Strogatz, 1998). While relations within clusters of personal networks can be tight, digital networks as a whole are typically loosely connected. Because relations in personal networks are configured around social foci of geography and similarity (Baldassarri and Bearman, 2007; Centola, 2015; Feld, 1981), we argue that proximity is a condition for transmission mechanisms in connective action. We therefore emphasize geographical and social proximity in our empirical analysis, to understand how engagement with digitally networked action is sustained.

Following review and discussion of literature and methods, an analysis of the overall development of the campaign is presented. We first show varying degrees of engagement, ranging from sending a single message to engagement with direct actions. Second, we show how engagement is rooted in a distinct geography: a backbone of core users is located in particular cities, local groups latching on to the campaign are concentrated a range of locations, and the network is complemented by a large transient contingent of geographically dispersed users. Third, we show how social and geographical proximity serves as a condition for transmission in digital networking: when people are far away they are likely to develop relations if they share an affiliation, when people do not share an affiliation they are more likely to develop relations with others living nearby. We conclude by elaborating on the paradox of proximity in digital activism: while it has the capacity to transcend barriers, proximity configures the networks undergirding digital interactions.

Proximity and transmission mechanisms in digitally networked action

Central to the #not1more campaign is the use of social media as a networking strategy. Organizer Marise Franco refers to it as an "open source campaign", seeking to use social media to connect activists and organizations in the highly fragmented field of immigration advocacy. Through years of experience, organizers know well the functioning of activist networks throughout the country, the established organizations and unions, the policy makers and media landscapes. The campaign emphasizes open participation through digital media to mobilize personal networks. As such, it can be understood as an instance of organizationally enabled digitally networked action.

The concept personal action frame is key to digitally networked action, as it draws a distinction between the traditional logic of collective action (Olson, 1965) and the logic of connective action (Bennett and Segerberg, 2012). The logic of collective action analyses action as the unified outcome of resource concentrations, structural features, or the formation of collective identities. Accordingly, collective action frames are conceptualized as an alignment of meaning structures such as experiences (Benford and Snow, 2000, p. 623), or claims about injustice, agency, and identity (Gamson, 1995). By contrast, the logic of connective action emphasizes the sharing of personal action frames on digital media networks and does not presuppose frame alignment. Against the backdrop of increasingly fragmented and individualized societies, engagement with politics develops around personal action frames: individualized orientations that are expressions "of personal hopes, lifestyles, and grievances", rather than collective action frames: expressions of "social group identity, membership, or ideology" (Bennett and Segerberg, 2012, pp. 743–744). More than was possible before, social media enable fast and far-reaching transmission of individual expressions without requiring the adoption of unifying collective action frames. The resulting connective action emphasizes the aggregation of diverse expressions of identity, rather than alignment of meaning structures or the forging of collective identity.

A key challenge in digitally networked action is to sustain engagement over longer periods of time (Bennett and Segerberg, 2012, pp. 760–761; Tufekci, 2017). Understanding how engagement is sustained in digital networking calls for analysis of the "transmission mechanisms involved" (Bennett and Segerberg, 2012, p. 747). As the sharing of personal action frames, engagement with connective action is

a relational act: interacting with others about individual orientations. Digitally networked action cannot be sustained when transmission fails and personal action frames are not shared in personal networks. The medium, for instance Twitter, may serve to bridge barriers at "the intersections of social networks defined by established political organizations, ideologies, interests, class, gender, race, or ethnicity." (Bennett and Segerberg, 2012, p. 747). According to Bennett and Segerberg, digital technology can be thought of as a transmission mechanism because it enables the sharing of frames (2012, p. 754). More specifically for the case of organizationally enabled digitally networked action, transmission depends on "a stable core of organizations sharing communication linkages and deploying high volumes of personal engagement mechanisms" (Bennett and Segerberg, 2012, p. 761). They suggest that sustaining connective action depends to some degree "on the kinds of social technology designed and appropriated by participants, and the kinds of opportunities that may motivate anger or compassion across large numbers of individuals" (Bennett and Segerberg, 2012, p. 754). In our understanding, the term 'mechanism' refers to the digital networks used to share frames, such as the social medium Twitter, and 'transmission' refers to the act of sending frames.

We argue that proximity can be conducive or limiting to the transmission of personal action frames. This argument is prompted by research showing that the configuration of networks shapes transmission dynamics (Watts and Strogatz, 1998), and by research demonstrating that proximity configures social relations (Conover, Davis, et al., 2013; Feld, 1981; McPherson, Smith-Lovin, and Cook, 2001; Rivera, Soderstrom, and Uzzi, 2010). Accordingly, we believe that proximity is a condition in digitally networked action. Because it configures the personal networks upon which transmission depends, proximity should be taken into account when analysing digital networking.

Potentially, digital networking diminishes geographical constraints on the development of a protest campaign. Digital media provide particular affordances which are leveraged for networking by sharing personal action frames. Affordances are "possibilities for action" (Evans et al., 2017, p. 36) provided by digital media, arising from the relation "between an object/technology and the user that enables or constrains potential behavioural outcomes in a particular context" (Evans et al., 2017, p. 36). More specifically, Twitter provides the affordance of visibility which is crucial to the possibilities for connective action it provides activists. Visibility

serves the expression of personal action frames as a form of engagement. Easily creating and sharing messages facilitates the visibility of ideas and orientations pertinent to the campaign, by reducing informational transaction costs (Coiera, 2000), creating common ground, and maintaining relationships (cf. Evans et al., 2017; Vitak, 2014). Twitter can be used to create and broadcast action frames, which in turn can be adapted and rebroadcast easily throughout increasingly further reaching personal networks. In this way, engagement in the form of creating and sharing personalized content enables "coordinated adjustments and rapid action aimed at often shifting political targets, even crossing geographical and temporal boundaries in the process" (Bennett and Segerberg, 2012, p. 753). Potentially, this facilitates viral diffusion of information, inspiring others to plug in to the campaign and undertake local direct actions elsewhere. To engage in with the #not1more campaign, activists in one place can use Twitter to easily create and share content, spreading action frames far and wide fast to others.

Despite the potential of social media for networking with others far and wide, prior research establishes proximity as a key configuring element of personal networks (Centola, 2015; Feld, 1981; Kossinets and Watts, 2006; McPherson et al., 2001; Onnela, Arbesman, González, Barabási, and Christakis, 2011). Proximity effects on digital networks can be geographical (Borge-Holthoefer et al., 2011; Borge-Holthoefer, González-Bailón, Rivero, and Moreno, 2014; Conover et al., 2013; Nicholls, 2009) or interest-based (González-Bailón, Wang, and Borge-Holthoefer, 2014; Tremayne, 2014; Tremayne, Zheng, Lee, and Jeong, 2006). Moreover, connectivity in digital networks is generally highly uneven (Borge-Holthoefer, Magdy, Darwish, and Weber, 2015; Borge-Holthoefer et al., 2011; González-Bailón, Borge-Holthoefer, and Moreno, 2013; Tremayne, 2014; Varol, Ferrara, Ogan, Menczer, and Flammini, 2014). People tend to sustain interaction more readily with others who are like them and geographically nearby. Accordingly, we argue that proximity is relevant in the configuration of personal networks, and because digital networking depends on transmission of frames through personal networks, we examine how proximity operates as a condition for transmission in digital networking.

To summarize, the #not1more campaign is an instance of connective action. Social media are leveraged in an effort to organize a nationwide coalition among a broad range of activists and organizations. The key challenge in digitally networked action is to sustain engagement over time. To address this challenge, we examine how proximity operates as a condition for transmission in the personal

networks upon which connective action depends. While the affordances of digital media potentially help activists to transcend boundaries, proximity is a key to the configuration of personal networks. This is a paradox of digital activism: while digital communication technologies are particularly well suited to enable the sharing of personal action frames and afford the capacity to dissolve spatial barriers, proximity is essential for sustaining relations over time.

Data and Methods

Twitter data

To study engagement with the online #not1more campaign, data was collected from Twitter. The data set consists of tweets with the hashtag #not1more, posted in the period between January 2013 through August 2014, 20 months after the hashtag first appeared on Twitter in relation to immigration and deportations. This hashtag was selected after preliminary analysis of hashtags related to immigrant rights struggles, sampling for volume and topic specificity. Tweets were made publicly available by Twitter through its API with the consent of its users (Twitter Inc., 2014). As per the Twitter terms of service, personal information with which individuals or groups might be identified was anonymized.

The dataset consists of 108,198 tweets from 16,113 unique user accounts. Each of these users represents a node in our network analysis, each mention and retweet between them represents a directed tie. A user is understood to be 'active' when they tweeted within the given period under analysis. There were 168,393 directed ties among all nodes. Analyses were based on 15,019 reciprocal, undirected edges.

There are significant limitations to the use of Twitter data in social movement research. Four interrelated concerns are recognized and stressed here: inference, power inequalities, representativeness, and ethics. First and foremost, scholarship has pointed out that online participation and activity cannot be equated *pars pro toto* with a social movement (Flesher Fominaya and Gillan, 2017). As this chapter focuses on a specific Twitter campaign, it analyses activity on Twitter. We think of this as an instance of digitally networked action situated within much broader social movement phenomena about which we make no general claims. Second, broadly speaking, digital methods commonly ignore power imbalances involved in the lived experience, media ecology, and use of social media (Flesher Fominaya and Gillan, 2017; cf. Juris, 2012; Tufekci, 2014a). We note that adequately

addressing this concern would require a different kind of research design that includes thorough qualitative inquiry, which is beyond the scope of the current study. Extensive prior ethnographic field work and familiarity of the authors with immigrant rights activism as well as the use of digital media goes some way to abate this concern, although analyses do not explicitly stress this in the current chapter. Third, and more specifically, power inequalities are reflected in the demographic of Twitter users, which poses serious concerns about representativeness (González-Bailón, Wang, Rivero, et al., 2014; Mislove et al., 2011; Tufekci, 2014a). These biases are exacerbated by reliance on a single platform and single hashtag. Given the centrality placed by the campaign's organizers on this specific platform and particular hashtag, we think this focus is justified. While the Twitter demographic (or geographical distribution thereof) is certainly not representative for everyone involved in immigrant rights struggles, users of the #not1more hashtag can be understood to be involved in digital networking as part of this particular campaign. Fourthly, inequalities give rise to ethical concerns beyond Twitter's legal terms of service, which stipulates the use of data and consent but not risk of harm to users (Moreno et al., 2013). It cannot be assumed that users are aware that their digital activity is published in research. To address this, no information by which users can be identified is reported in this chapter, and analyses are concerned with aggregate levels.

Patterns of engagement: activity, connectedness, persistence

The #not1more campaign provides an opportunity to examine the transmission of personal action frames in digitally networked action empirically. People engage with the #not1more campaign by creating and sharing personal expressions. On Twitter, transmission of frames takes the form of posting, mentioning and retweeting messages. To examine patterns of engagement with the campaign online, we analysed activity and connectedness. Because we are interested in how such engagement is sustained, we also examined persistence. The analysis emphasizes transmission as sending of frames, over the meaning of individual tweets in terms of a user's perception or adoption. We assume that the inclusion of the #not1more hashtag signals a degree of awareness of the campaign.

Activity differentiates users who engage very often from those who tweet only sporadically. It was measured individually as a user's number of tweets, and cumulatively as tweet volumes at different times. Cumulative measures were used to identify the campaign's most active locations. For every month in the dataset,

the number of active unique users was calculated for every location. The user base for which a location accounted is defined as the number of active users in a city, divided by the total number of active users. This measure is reported for periods of 3, 12 and 20 months.

Connectedness differentiates users who engage online with many others in the campaign, from those who do not. This concerns transmission in terms of reciprocation. It was measured individually as a user's reciprocated ties, and cumulatively as degree distributions over time. Cumulative degree distributions serve as an indication of how concentrated relations are in a core of activists, or shared more evenly among all participants. This was calculated as the power-law exponent using the method proposed in (Clauset et al., 2009).

Persistence differentiates dedicated users who remain engaged with the campaign for a long time from more ephemeral users. This concerns transmission in terms of the relation between sending personal action frames and subsequent ongoing engagement with the campaign. A user was considered a new recruit on the first day someone tweeted with the #not1more hashtag. Individual persistence was calculated as the proportion of days remaining in our dataset after this first tweet. Cumulative persistence was measured as consistent activity in a particular location. To determine the turnover of a location's user base, we calculated the difference between the maximum and minimum number of unique monthly active users, divided by the average number of users per month (for the full 20-month period) in each city. The resulting normalized measure is the factor by which the spikes of user activity are removed from the average number of users, with 0 indicating a perfectly constant user base, and higher values indicating a more inconsistent user base.

To understand what generates engagement with the campaign, we examined events referenced in tweets during particular peaks of activity. We differentiated local and global events. We think of direct actions related to the campaign as local events. First, the tactical repertoire of the campaign was derived from manual analysis of tweet captions and prior ethnographic research (Nicholls and Fiorito, 2015; Nicholls and Uitermark, 2017). This led to a lexicon of relevant direct actions: 'blockade', 'march', 'demonstration', 'rally', 'vigil', 'petition', 'heckle', 'banner', 'occupation', 'sit-in', 'undocubus' (referring to activists touring the United States in a bus), 'hunger strike', and 'disobedience'. Second, every tweet in the dataset was referenced against this lexicon to identify actions reported on Twitter. Third, to avoid duplicate counts, this set of actions was validated manually. Every direct

action referenced in tweets was coded for location, type of action, and topic, by examining text and photos in tweets. Where available, hyperlinks in these tweets were followed to confirm event announcements and websites. This procedure yielded 439 direct actions in the 20-month period under examination. While certainly not an exhaustive list of local events related to immigrant rights struggles in the period under study, it does provide good coverage of actions that are referenced in the data set of #not1more tweets.

Proximity

To examine the configuration of online personal networks in the #not1more campaign we determined social and geographical proximity. The effect of proximity on engagement was calculated as a percentage of reciprocated ties in the empirical network where users share a location or affiliation. This was compared to simulated permutations of the network. One hundred network permutations were created by randomly reassigning affiliations and locations among users in an identical network structure. The percentage of ties with shared location or affiliation was the average of all permutations. This average indicates what proximity effects might be expected at random, and served as a baseline for comparison of the empirical effect.

The term affiliation is used as a shorthand to indicate social proximity based on interests, and was derived from the self-described individual or organizational biography of an account. We followed a basic semi-supervised procedure. First, categories were inferred from manual examination of 1,612 self-reported user profiles. This sample (10%) was randomly selected from the complete user base. Coding yielded 23 categories (e.g. DREAMers, unions, faith-based organization) with a lexicon of corresponding keywords (e.g. 'dream', 'union', 'church' respectively). Second, every profile in the dataset was referenced against this lexicon. This semi-supervised procedure assigned affiliations to 10,943 users (68%).

Geographical proximity is defined as the geodesic distance between the last known coordinates of two network nodes sharing a tie. Users who are located up to 30 miles from each other were coded as being 'nearby'. User locations were derived from the self-reported bio and location fields on public Twitter profiles, rather than the opt-in coordinates at tweet-level which only 0.2% of tweets include. Self-reported locations were geocoded using the Google Maps Geocoding API (Google, 2014; Kahle and Wickham, 2013), which resolved ambiguous, misspelled and colloquial names, ('DC' to Washington, D.C.), and returned longitude and

latitude coordinates as well as a measure of accuracy. This measure of accuracy was used to filter out extraneous results such as 'USA' or 'Earth'. Given the campaign's focus on a national policy debate, we restricted analysis to locations in the U.S.[5]. To validate that automated geocoding achieved higher than the 85% accuracy deemed necessary for statistical reliability (Ratcliffe, 2004), the location of 870 profiles was validated manually by cross-referencing usernames from the dataset with current biographical information available online. This procedure yielded accurate locations for 3,116 users in the United States (19% of all users).

Results

Patterns of engagement

While the hashtag is used by a small group of users shortly after its introduction, activity related to the #not1more campaign on Twitter increases over time. More people become involved and more tweets are sent as time progresses. This activity develops in peaks of tweet volumes which become more frequent in later stages of the campaign (Figure 3.1). This increasing number of users adopting the hashtag suggests that engagement with the campaign was sustained over time among an increasingly broad user base, while fluctuating activity suggests the campaign was driven by consecutive bursts of attention.

Activity is based in specific locations, generating a distinct geographical pattern to online engagement with the #not1more campaign. Users exhibit different levels of tweeting activity in different locations. The proportion of users as well as the traffic that is generated varies per state. Striking differences between California and the District of Columbia stand out. In California, 23.0% of users generate 18.0% of traffic volume, whereas in D.C. 3.7% of users generate 13.7% of traffic. Figure 3.2 shows the number of unique users by county and illustrates that users in the campaign are mostly concentrated in metropolitan areas.

These results indicate that the campaign is driven by varying degrees of engagement in different places. Core users, who are highly-connected, persistent, and account for large proportions of traffic, are concentrated in specific places.

5 Geodesic distances are calculated using the R geosphere package (Hijmans, 2016). Coordinates are reverse geocoded to county levels (with FIPS number) in the United States using the latlong2state functionality of the Data Science Toolkit API (Elmore and Heiss, 2014) and plotted in R using the choroplethr package (Lamstein and Johnson, 2014)

Figure 3.1: Number of tweets per day

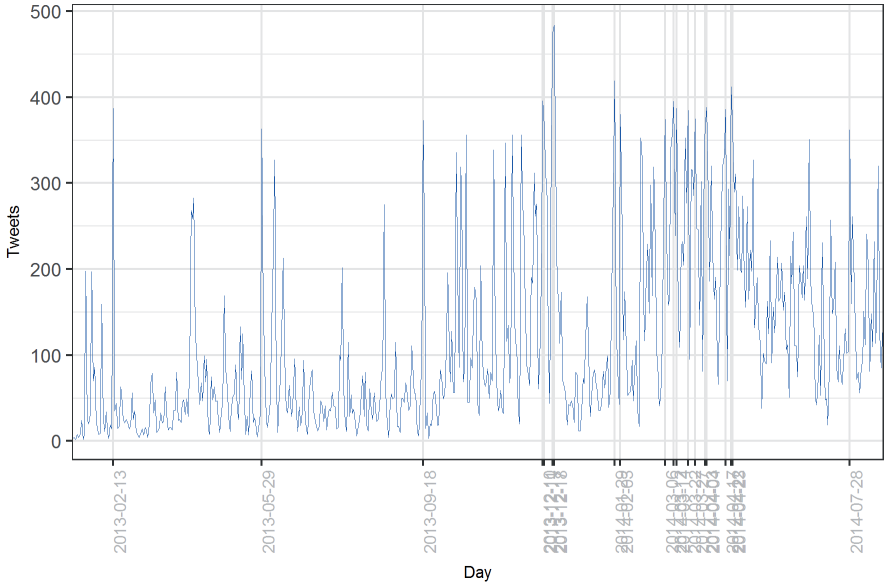
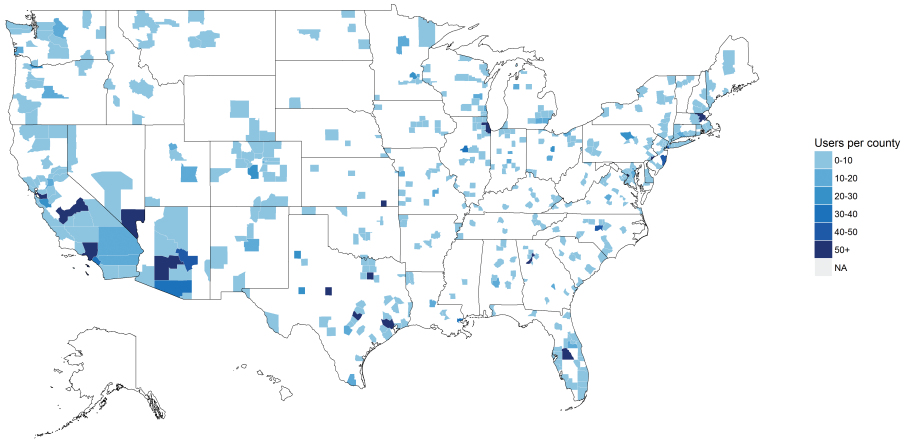


Figure 3.2: Number of unique users by county after 20 months



California is home to a tapestry of community-based groups and individual activists, while Washington, D.C. harbours large advocacy organizations that have dedicated resources to tweeting routinely and prolifically (Nicholls, Uitermark, and van Haperen, 2016). Zooming in closer on the top 30 cities that form the campaign's hubs (Table 3.1), we find that four urban areas harbour the core users

and together account for 35.0% of the entire user base: Washington, D.C., New York, Los Angeles, and Chicago. These four places are the campaign's hubs.

Table 3.1: Consistency and size of user base per city over time

City	Total users	Consistency	% after 3 months	% after 12 months	% after 20 months	% Average
Washington. DC	1,462	1.97	9.30	6.74	9.78	8.61
New York. NY	1,441	1.71	10.57	9.98	9.89	10.15
Los Angeles. CA	1,231	1.72	10.27	9.49	8.93	9.56
Chicago. IL	922	2.30	5.29	6.95	6.24	6.16
San Francisco. CA	479	1.96	2.30	3.29	3.18	2.92
Austin. TX	306	3.99	1.34	1.30	1.80	1.48
Seattle. WA	289	3.67	1.92	1.46	1.80	1.73
Philadelphia. PA	284	3.17	0.79	1.41	1.66	1.29
Boston. MA	280	4.00	2.35	1.77	1.87	2.00
Phoenix. AZ	275	1.75	4.38	2.75	2.24	3.12
Oakland. CA	249	1.85	1.53	1.82	1.70	1.68
Miami. FL	230	1.48	1.79	1.61	1.69	1.70
Houston. TX	218	2.39	2.25	1.39	1.52	1.72
Atlanta. GA	176	2.39	0.62	0.89	1.13	0.88
San Diego. CA	150	2.13	0.89	1.05	1.01	0.98
Dallas. TX	120	2.17	1.24	1.01	0.94	1.06
Tucson. AZ	113	3.36	0.57	0.80	0.75	0.71
Minneapolis. MN	107	3.18	1.36	0.78	0.76	0.97
Denver. CO	92	2.17	0.81	0.69	0.66	0.72
Portland. OR	92	2.39	0.38	0.50	0.57	0.48
New Orleans. LA	89	5.39	0.62	0.66	0.59	0.62
Charlotte. NC	79	2.78	0.41	0.49	0.55	0.48
San Antonio. TX	78	2.82	1.15	0.57	0.58	0.77
Las Vegas. NV	77	3.90	0.79	0.52	0.54	0.61
Columbus. OH	75	1.87	0.91	0.68	0.58	0.72
London. UK	67	2.39	0.26	0.34	0.42	0.34
Sacramento. CA	61	2.30	0.53	0.39	0.41	0.44
Salt Lake City. UT	60	4.67	0.43	0.28	0.37	0.36
Kansas City. MO	47	4.68	0.10	0.24	0.28	0.21
Tacoma. WA	26	7.69	0.00	0.03	0.12	0.05
Average	**305.83**	**2.94**	**2.17**	**2.00**	**2.09**	

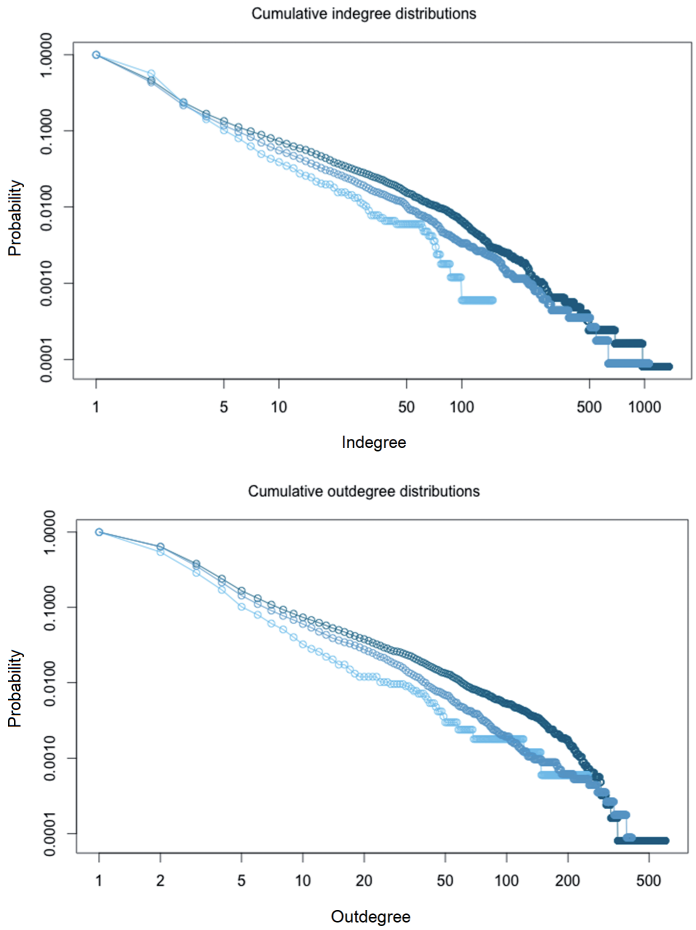
Note: Correlation of consistency and average proportion of user base: -.401

In terms of persistence, the user bases in the four campaign hubs are not only disproportionately large, they are also more consistent at 1.9 in comparison to the average turnover of 2.9 of all cities with more than 9 users active in a month. There are 22 additional cities with more than 9 active users per month, such as

San Francisco, Austin, Seattle, and Philadelphia, together accounting for 23% of the user base. The campaign's user base in these cities is less consistent than in the hubs (3.3). Cities other than the hubs are less consistent and show more distinct spikes in user activity. The cities with the most volatile patterns are Tacoma, New Orleans, Kansas City, Salt Lake City, and Boston. Here, sudden spikes in the size of the user base stand in stark contrast to the national average turnover as well as to what might be expected from prior and subsequent activity in these cities. A further 1,016 cities accommodate the remaining 39.0% of users, none of which have more than 9 users active in a month. These cities have an average turnover of 7.2. This pattern indicates that the user bases in particular cities is much more consistent, harbouring the core users of the campaign who remain persistently active. Other cities have more volatile turnover, where attention is more subject to bursts generated by one or a few events.

Some activists have more online connections in the campaign than others. Throughout the campaign a core of strongly connected users is complemented by users who interact less intensively and less persistently. Engagement, in terms of connectivity, is distributed unevenly: a few core users are highly connected, while the majority of users have only a few ties. A perfectly even distribution of ties would indicate that everyone has exactly the same number of interactions. In the #not1more campaign, many users interact with just a few others, while only a few interact with many others. This is reflected in a power-law exponent of approximately 2.07. Figure 3.3 expresses this uneven distribution as the probability of randomly selecting a node with more than a certain number of interactions. This uneven structure is established early on: after the first month the top four targets (1.0%) account for 20.0% of incoming traffic and the top three (1.0%) generate 31.6% of all outgoing traffic. With regard to indegree at maximum system size, the top 1.0% of users (88 out of 8,796) receive 55.1% of all directed ties (92,851 out of 168,393 total), and the top 10 users (0.1%) account for roughly a quarter of all received ties (24.8%). This pattern is less pronounced for outdegree at maximum system size with the top 1.0% of users directing 38.6% of all ties to others, and the top 10 users (0.1%) accounting for 8.9% of outgoing ties. These findings are in line with other analyses of digital networking and suggest that the #not1more campaign is topologically similar to other protests playing out on Twitter (Borge-Holthoefer et al., 2011; Conover, Ferrara, et al., 2013; González-Bailón et al., 2011).

Figure 3.3: Pattern of Engagement Over Time



Note: Cumulative indegree distributions after 3 months (light), 12 months, 20 months (dark); (b) Connectedness over time: cumulative outdegree distributions after 3 months (light), 12 months, 20 months (dark).

This pattern of engagement, peaks of activity that are generated by a differentiated user base and rooted in a distinct geography, can be better understood when examining events at particular peak times, as illustrated by some examples. Online attention for the #not1more campaign is driven by both national and local events, generated by national media coverage of related topics and local actions in places like Tacoma and Boston (Table 3.1). One example of a local peak takes place in March 2014 in Tacoma. At that time, Tacoma's ICE Northwest Detention Center was the site of a massive hunger strike, and rallies and fasts were held throughout

the city. Almost 1,200 people went on hunger strike, generating a lot of national media attention as well as many tweets. In and around Tacoma, 45 new recruits latch on in relation to these actions. On average, these recruits engage persistently (0.4% of the remaining campaign). Another example of a local peak takes place in Boston around April 17, 2014, marking the Boston 'Not 1 More' rally, the blockade of the Suffolk County House of Corrections, and the subsequent arrest of 19 activists. This day of action generated 35 new recruits in Boston. On average, they are relatively persistent: 0.2% of the remaining campaign. These two examples show that direct actions generate a lot of local activity and draw in recruits who engage relatively persistently with the campaign.

Other peaks of attention are generated by national events, which generate a more diffuse pattern, with less persistent and more geographically dispersed recruits. December 17, 2013 stands out as one such peak. On this day, there were 182 new recruits nationwide, 178 of whom referenced an announcement about a radio interview with an NDLON organizer. The radio station is located in New York City, but has a national audience thanks to its online broadcasts. 140 of these new recruits only remained active for one more day, and none longer than three days. Recruits hail from across the nation, without any clear concentrations in particular locations. Another example of how a national event is tied in to the #not1more campaign is President Obama's annual State of the Union address on January 29, 2014. On this day there were 98 new recruits. The address generated a lot of tweets containing the hashtag, most prominently retweets of a message urging Obama to consider deportations as part of his legacy. Recruitment was not concentrated in any particular area, and most recruits (79 out of 98) were not persistent. They sent a single message, only on the day of the address. Their contribution was isolated and short-lived, simply retweeting a single action frame.

These examples illustrate that local and global events generate different kinds of engagement. Localized bursts of engagement are generated by local direct actions. Users outside of the major campaign hubs plug in to the campaign with actions in their own locality, generating local peaks of activity (Table 3.2). Furthermore, we find that users whose first tweet concerns a direct action, and are based in the same location as that action, are more persistent, have more local contacts and a slightly higher number of overall contacts than other recruits. This pattern of engagement can be differentiated by type of action: some types of direct action generate more, and more persistent, recruits.

Table 3.2: Engagement By Type of Direct Action

Action	Occurrences	Tweets	Accounts	Recruitment	Persistence
Rally	121	1128	718	229 (32%)	1.34
March	62	1605	818	237 (29%)	3.47
Vigil	54	642	387	96 (25%)	1.8
Blockade	28	374	307	135 (44%)	1.22
Petition	27	1415	854	330 (39%)	0.99
Hunger strike	26	2360	1251	574 (46%)	2.8
Banner	16	255	179	39 (22%)	1.51
Sit-in	12	222	195	60 (31%)	0.6
Demonstration	4	52	41	7 (17%)	1.71
Occupation	4	629	450	218 (48%)	0.56
Heckle	3	90	68	17 (25%)	1.24
"Undocubus"	2	71	65	9 (14%)	0.22
Disobedience	1	444	318	90 (28%)	1.96
Total	**360**	**10,929**	**6700**	**2472**	

Notes. Occurrences: the number of times this type of action occurs during the period. Tweets: the number of tweets that contain reference to this type of action during the period. Accounts: the number of accounts that tweet at least once with reference to this type of action during the period. Recruitment: the number of new recruits, whose first tweet contains reference to this type of action, and the percentage of new recruits over all users tweeting about this type of action. Persistence: the adjusted average remaining period that new recruits remain active after first tweeting about this type of action.

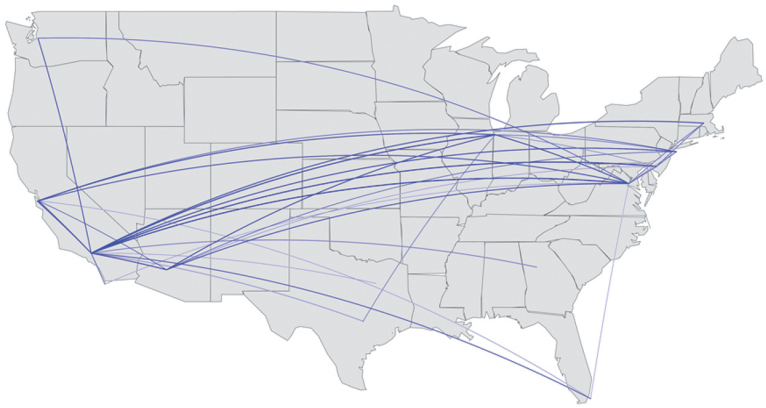
Different tactical repertoires generate varying levels of engagement with the campaign. In absolute frequencies, the tactic of choice is rallies, followed by marches and vigils. In terms of recruitment rate (the number of new recruits among users tweeting about an action), occupations, hunger strikes, and blockades are most successful in drawing in new recruits. These repertoires were most salient for people to start using the #not1more hashtag. However, in terms of commitment to the campaign, marches and hunger strikes generated the most persistent new recruits online. These findings suggest that users who become involved by tweeting about local direct actions are more persistent than the average users and have a greater degree of connectivity. In addition, some types of action generate more, and more persistent recruits.

Transmission mechanisms of engagement

We now turn our attention to how users engage with each other in the #not1more campaign, focusing on proximity as a condition for transmission. While a lot of interaction in the campaign occurs between people who live in close proximity, there are also many interactions between people across the nation.

The structure of trans-local ties between users (Figure 3.4) is organized along the campaign's metropolitan hubs: primarily Los Angeles, Washington, D.C., New York City, and Chicago. Ties between these hubs account for 32.9% of reciprocated ties. This results in a pattern that resembles a hub and spoke network, similar to findings in other studies (Conover, Davis, et al., 2013; Hemsley and Eckert, 2014b).

Figure 3.4. Geography of Reciprocated Ties



To analyse the effect of proximity on the configuration of personal networks, we compare the empirical network with randomized simulations of the network. Table 3.3 shows the percentages of ties connecting nodes of the same affiliation and location. In the #not1more campaign, users tend to engage with each other when sharing background and shared locations, more than might be expected at random.

Table 3.3: Effect of proximity in empirical versus random networks

	Same affiliation (%)	Different affiliation (%)	Total (%)
Same location	Empirical: 9.0	Empirical: 29.5	Empirical: 38.5
	Random: 0.5"	Random: 0.6	Random: 1.1
Different location	Empirical: 11.3	Empirical: 50.1	Empirical: 61.41
	Random: 1.5	Random: 97.5	Random: 99.0
Total	**Empirical: 20.3**	**Empirical: 79.6**	
	Random: 2.0	**Random: 98.1**	

Even with the network structure left intact in randomizations of the node attributes, the pattern of affiliation and location is striking in the empirical network when

compared to random permutations. These findings confirm that participants in the campaign 1) traverse geographical distance when socially proximate and (2) traverse social distance when geographically proximate.

Conclusions

How is engagement sustained in digitally networked action? Based on the #not1more campaign that began in 2013 in the United States protesting against deportations, we have examined this question using quantitative, geographical and social network analyses of Twitter data. We find a differentiated development of engagement rooted in a distinct geography. Proximity, the condition generating this distinct geography, is shown to sustain engagement to varying degrees. While digital media may help activists to transcend boundaries easily, the personal networks, upon which transmission depends, remain configured primarily around place and similarity.

Our research shows a differentiated engagement with digital networking. The backbone of the #not1more campaign consists of highly active, well-connected, and persistent core organizers and activists, located in particular major cities. Local groups of activists plug in to the campaign, engaging with direct actions. There is a range of locations that show episodic bursts of recruitment in relation to local direct actions. Cities such as Boston show sudden spikes of localized recruitment at specific times. This hub-and-spoke structure is complemented by a large contingent of transitory and geographically dispersed users who direct their attention to points of conflict. Engagement with the campaign is generated by both national and local events.

Our findings show that the dynamics of contention online are differentiated by existing structures of proximity. Scaling up, in terms of active and persistent engagement with the campaign, can be related to proximity. National events such as the State of the Union address reach broad and geographically dispersed publics. Someone who witnesses a rally or march in their home town is likely to engage in a more active, connected, and persistent manner than someone who engages with the campaign in relation to national events. Moreover, there are differences in the level of persistence generated by different types of local actions.

With regards to the structure of personal networks in this digitally networked campaign, we find a polycentric structure also configured by geographical and

social proximity. Conover et al (Conover, Davis, et al., 2013) found that relations across space are established through the sharing of slogans and relations within a place are established through the sharing of resources. Our findings suggest a different, though complementary condition: geographical proximity makes it more likely that social distance is bridged, and social proximity helps to bridge geographical distances. This helps to understand how digitally networked action can be sustained despite the ephemeral nature of open participation. The #not1more campaign was propagated, particularly in its early stages, by a core of activists who had developed strong pre-existing ties among themselves from intensive contact on the basis of proximity.

The #not1more campaign is in some ways unique and should not be conflated with social movements in general. We believe that proximity has always been of importance to the configuration of networks in social movements, but that digital data allow for new ways to analyse these configurations empirically. As an instance of digitally networked action, insight into proximity as a condition for transmission can inform analysis of social movements emerging on the interface of urban and online spaces, such as Black Lives Matter. Based on our findings and insider accounts (Juris, 2012; Schneider, 2012; Schwartz, 2011), we would expect to find the same pattern in other digitally networked movements: differentiated involvement, and a core group of activists who drive the campaign (cf. Lee and Chan, 2016). Our findings show that the differentiated activity is rooted in geography, with connections forged within and between particular cities (Nicholls and Uitermark, 2017). Writing about the diffusion of sit-ins in 1960, Andrews and Biggs found "little evidence that social networks acted as a channel for diffusion among cities" (2006, p. 752). In the #not1more campaign, these channels are demonstrably provided by social media mechanisms. We would further expect that the development of other digitally networked movements is similarly influenced by proximity as a condition for transmission that produces differentiated engagement. In short: geography remains of importance in the configuration of social relations in digital networking. Some scholars have suggested that place-specific qualities become more important as the friction of distance decreases (Sassen, 1991; Storper, 1997) and this might also be true for social movements. An avenue for further research is to examine proximity and transmission of personal action frames in terms of reception and amplification of meanings. Analysis of personal action frames that takes into account substantive content would be an important step in that direction, which might be inspired by

theorization of collective action frames geared to meaning structures (Benford and Snow, 2000; Gamson, 1995). This would allow for consideration of digital networking as the mimetic mechanisms discussed in terms of scaling up (McAdam et al., 2001; Tarrow and McAdam, 2005) and diffusion (Andrews and Biggs, 2006; Chabot and Duyvendak, 2002; Givan, Roberts, and Soule, 2010).

While social media allow activists to digitally network with others far and wide, solidarities tend to emerge in accordance to location and interest. We believe that geographical and social proximity provides sufficient levels of solidarity needed to ensure some stability within these movements. Proximity continues to be crucial to the configuration of the networks in digital activist campaigns. Herein lies the paradox of digital activism: while it has the capacity to dissolve spatial barriers, proximity is essential for sustaining relations over time.