

One Day in the Life of a National Twittersphere

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Abstract

Existing research into social media platforms often focusses on the exceptional: key moments in politics, sports, or crisis communication. For Twitter, this is usually centred on hashtags or keywords. Routine and everyday social media practices remain underexamined as a result; the literature overrepresents the loudest voices: those users who contribute actively to popular hashtags. This article addresses this imbalance by exploring in depth the day-to-day patterns of activity within the Australian Twittersphere, for a 24-hour period in March 2017. We focus especially on previously less visible everyday social media practices that this shift in perspective reveals. This provides critical new insights into where, and how, to look for evidence of online traces in a systematic way.

Keywords

social media, Twitter, Australia, network analysis, phatic sharing

Introduction

Much existing research into the uses of social media focusses on the exceptional: key moments in politics (e.g. Larsson & Moe 2014; Papacharissi & Blasiola 2016), sports (e.g. Blaszka *et al.* 2012; Highfield 2014), or crisis communication (e.g. Palen *et al.* 2010; Shaw *et al.* 2013). In Twitter research, because of how the Twitter Application Programming Interface (API) privileges certain data gathering approaches, such work is usually centred on hashtags or keywords (Burgess & Bruns 2015). This has produced many useful insights – as documented in the collection *Hashtag Publics* (Rambukkana 2015) – but covers only a subset of the platform's uses. Routine and everyday social media practices remain underexamined; the literature overrepresents the loudest voices – those users who contribute actively to popular hashtags – and the communities of users that are already well known to researchers. Methodologically, it remains far more difficult to examine what is not already known: the ordinary, everyday, apparently unremarkable practices of the majority of Twitter users.

Indeed, such mundane, everyday, ordinary uses (and users) were often denigrated as banal and inconsequential: Pear Analytics' early study of Twitter content infamously described some 41% of all tweets as "pointless babble" of the "I am eating a sandwich now" variety (2009:4-5). Such negative connotations, attached especially but not exclusively to supposed acts of oversharing, have persisted for social media uses that do not fit into acceptable categories of 'meaningful' activity. They were eventually challenged, and platforms like Twitter were thereby "debanalised" (Rogers 2014), yet even this gradual recognition proceeded more often by focussing on the non-mundane uses of social media that were seen as 'meaningful' than by rescuing the mundane from its linkage with supposedly banal, pointless babble.

More recent contributions have highlighted the very meaningful roles that apparently "banal" uses of social media can play both for the users themselves and for their social networks. "Banal" tweets serve as an important vehicle of self-affirmation", through identity creation and performance (Murthy 2018:32), and play a critical role

in maintaining social relations with an “imagined audience” of followers (Marwick & boyd 2011). This focus on the mundane and everyday activities of ordinary users, across all digital media contexts, constitutes an important “shift in perspective” (Sandvik *et al.* 2016:10): away from a focus on established, conventional producers of media content and towards the media experiences that users create for themselves, drawing both on such mainstream content and on their own materials. Social media become a distinct “space of agency” (Sandvik *et al.*, 2016: 15) that operates by its own logic (cf. van Dijck & Poell 2013) and has been domesticated more or less successfully into the everyday lives of its users (Haddon 2016).

Addressing the theme of onlife traces, we suggest that it is especially in these mundane social media activities where the inextricable interleaving of online and offline lives should be most pronounced, if the thesis of an integrated “onlife” is correct (Simon & Ess 2015). While some of the extraordinary phenomena that are identified by Twitter hashtags also relate to notable offline events (such as protests, crises, media and sporting events), others are predominantly confined to the platforms themselves (including memes and other trending topics), and all of them are by definition exceptional. Only by looking beyond these exceptions and towards the digital traces of the everyday can we fully document how far online and offline are indeed blended into an ordinary, domestic *onlife* in the full sense. To find consistent digital traces of an integrated onlife even in users’ non-exceptional social media practices is considerably more significant than seeing them occur only in clearly unusual circumstances.

Methodologically, this desirable “shift in perspective” remains difficult. Mundane uses have been studied at smaller scale through in-depth interviews, focus groups, media diaries, and other self-reporting, but large-scale observational data on the everyday practices of ordinary users is difficult to obtain: the data gathering functionality of standard platform APIs inherently privileges the extraordinary. To oversimplify only slightly: the extraordinary can be filtered for by searching for a small and well-known set of linguistic markers, such as keywords or hashtags. The mundane, by contrast, is all that remains after such content is accounted for – and is not readily offered by the platforms’ data interfaces. To capture the traces of onlife in the everyday activities of ordinary users, at scale, using natively digital research methods, requires a more circuitous approach: first, we must solve the problem of how to identify these activities and distinguish the ordinary from the extraordinary.

This article addresses this challenge by describing and implementing a framework for examining user activity patterns on Twitter well beyond limited hashtag collections, drawing on a comprehensive dataset that tracks the public activities of all Australian Twitter accounts. For this cohort of 3.7 million accounts, we have already mapped the clustering patterns in follower/followee relationships (Bruns *et al.* 2017) that influence, arguably more than hashtags, how information flows between users. We have also identified the topical interests of these clusters, and mapped participation in specific Twitter conversations across them.

We extend this work by exploring in depth the day-to-day patterns of activity within the Australian Twittersphere, for a 24-hour period in March 2017. This provides new insight into how conversations between users unfold through the day, and documents whether such interactions are guided by existing follower relationships, current hashtags, or other factors. Our analysis shows which parts of the network are consistently active throughout the day, and which are triggered by new events; and which are more focussed on publishing new content, on interpersonal conversation, or on news dissemination. This establishes a more complex picture of Twitter in Australia, beyond prominent hashtags, and in the closing sections we focus especially on the previously far less visible everyday practices that this shift in perspective reveals. We acknowledge that in itself this does not solve the problem of extracting meaning from the onlife traces in such everyday, mundane activities by ordinary users – but we hope it provides scholars with critical new insights into where, and how, to look for such traces in systematic ways.

Overall, then, this article addresses the following research questions:

- 1) How do we shift the focus of Twitter research away from extraordinary events and towards mundane, everyday uses?
- 2) Does a whole-of-population data analysis surface previously overlooked everyday user practices?
- 3) Do day-to-day activity patterns align with longer-term connection networks?

Our results provide new insights into the dynamics of Twitter engagement. They illuminate how everyday users utilise Twitter, and document the diversity of their communities. This is a reminder that the full story of social media in public and semi-public conversation can only be told if we look beyond the loudest voices, and highlights opportunities for further research.

Dataset

Our analysis builds on TrISMA (Bruns *et al.* 2016), a unique infrastructure that captures the public activities of an entire national Twittersphere. Filtering the global Twitter userbase for accounts that have recognisably Australian traits, TrISMA identified 3.7 million Australian accounts by February 2016, and continuously tracks their public tweets; Bruns *et al.* (2017) provide more detail on this dataset. For clarity, we note that this population includes individual users, group accounts, semi- and fully automated accounts (e.g. providing news updates), and various types of bots: these constitute a significant aspect of the lived experience of Twitter use, and we have therefore refrained from excluding them.

For the present article, we select a single 24-hour period of activity. We do not expect that period to represent longer-term patterns: rather, we are interested precisely in the particular peculiarities of an ‘ordinary’ day in the Australian Twittersphere, and in the analytical possibilities that such comparatively unfiltered data (in contrast to hashtag or keyword datasets) opens up. That said, we have avoided dates that we expected *a priori* to be dominated by known events; similarly, we selected a weekday rather than weekend day, as longer-term tweeting patterns for Australia show considerably divergent and diminished activity on weekends.

Through an iterative process of reviewing the news coverage from candidate days and conducting some preliminary analysis of Twitter activity for these dates, we selected Wednesday 22 March 2017 for this study. Considering the diverse timezones across Australian states and territories, and reflecting the location of major Australian population centres on the east coast, we use Australian Eastern Standard Time (AEST; UTC+10) to determine the start and end of this 24-hour timeframe. We selected all public tweets posted by the 3.7 million Australian accounts known to TrISMA; we also extracted any hashtags, @mentions, retweets, and URLs contained in the tweet texts. In total, this retains 1,294,569 tweets, from 176,737 unique accounts actively posting to Twitter that day. The substantial discrepancy between the number of actively posting accounts on 22 March 2017 and the total number of Australian accounts known to TrISMA is unsurprising: first, many social media users engage in “listening” (Crawford 2009) to public conversations, rather than posting their own contributions; second, surveys show that many Australians are using Twitter and similar services considerably less than once per day (Sensis 2016). The TrISMA dataset complements such reports with large-scale observational data from the platform itself.

Previous Work

Using TrISMA data, Bruns *et al.* (2017) performed a network analysis of the follower/followee relationships between those 255,362 Australian Twitter accounts with at least 1,000 connections within the global Twittersphere, identifying the major, densely connected clusters of accounts. Through close reading of the profile information for leading accounts in each cluster, they determined these clusters’ thematic focus. The validity of these labels was subsequently verified by Münch (forthcoming), using different methods.

Fig. 1 (from Bruns *et al.* 2017:6) shows the structure of this network, labelling the most prominent clusters; in the present article, we compare the patterns of interaction on 22 March 2017 with these much longer-term follower/followee relationships to assess whether everyday interactions are shaped by these networks, or transcend existing structures as users @mention or retweet accounts that they do not already follow. This is important not least in the context of continuing debates about the influence of “echo chambers” (e.g. Sunstein 2009) or “filter bubbles” (e.g. Pariser 2011) on communication patterns.

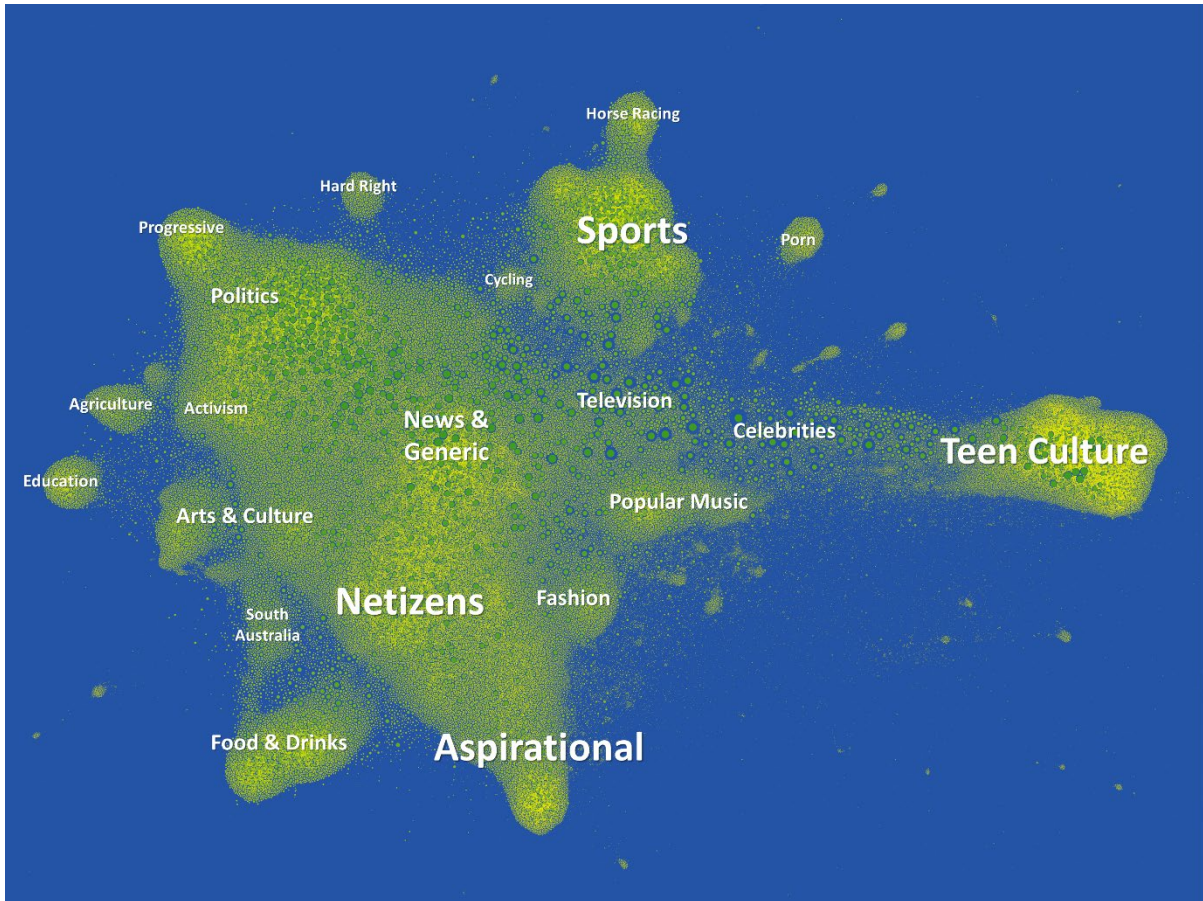


Fig. 1: Follower-followee network amongst the best-connected accounts in the Australian Twittersphere. Selected clusters labelled according to their thematic focus (reproduced from Bruns et al. 2017).

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However, we turn first to an analysis of overall activity levels across the Australian Twittersphere on 22 March 2017. This provides a unique insight into how Twitter is used within a specific national context, and creates opportunities for comparison with other national Twitterspheres.

Types of Tweets

Table 1 shows the overall distribution of activity across tweet types. The three major types of tweets (original tweets, @mentions, retweets) are used in relatively even proportions, with retweets most prominent. However, retweets are used by the smallest number of accounts: 50% of Australian accounts posted at least one retweet, compared to nearly 58% posting an original tweet. This indicates an uneven distribution of tweeting styles across the account population, with retweets more popular amongst smaller subsets of the entire Twittersphere. (Total percentages can add up to more than 100%, since tweets can be both retweets and @mentions at the same time.)

	Tweets	Percent of tweets	Unique accounts	Percent of accounts
Total	1,294,569	100.00%	176,737	100.00%
Original tweets	427,537	33.03%	101,785	57.59%
@mentions	422,895	32.67%	93,260	52.77%
Retweets	555,003	42.87%	88,752	50.22%
Hashtag	301,405	23.28%	72,672	41.12%

No hashtag	993,164	76.72%	104,065	58.88%
URL	695,282	53.71%	136,599	77.29%
No URL	599,287	46.29%	40,138	22.71%
Twitter.com URL	365,995	28.27%	84,263	47.68%
Non-Twitter.com URL	369,177	28.52%	90,044	50.95%

Table 1: Distribution of tweeting activity across different tweet types and styles, 22 Mar. 2017.

Less than one quarter of all tweets contained hashtags. This is remarkable given the considerable prominence of hashtag-centric studies, and provides a major impetus for our study: if this finding is typical for usage practices in Australia and elsewhere, then hashtag studies provide insight into the self-selecting groups of hashtag users, but ignore fully three quarters of ordinary tweeting activity. Such a major limitation ought to be recognised in any presentation of such studies, and addressed in their design.

Further, this significant imbalance between hashtagged and non-hashtagged tweets can arise only in part, if at all, from Twitter users' unfamiliarity with the concept of hashtags: although overall, users chose to hashtag only one in four of their tweets, more than 41% of accounts posted at least one hashtagged tweet during the day. Therefore, although many users are *capable* of using hashtags, they frequently *choose* not to do so. Overall, hashtags occur in retweets (27.59%) and original tweets (25.77%) more often than @mentions (20.12%): @mentions are thus used more frequently for small-scale conversations away from the enhanced visibility that hashtags facilitate. This supports the structure of micro-, meso-, and macro-layers of communication on Twitter that Bruns & Moe (2014) propose.

22 March 2017 sees a broadly balanced distribution of tweets with and without URLs: sharing links is a very common practice on Twitter. Indeed, more than three quarters of all accounts posted at least one URL during the day. Almost two thirds (61.69%) of URL tweets point back to *twitter.com*, usually referencing previous tweets (through Twitter's 'quoted tweet' functionality) or embedded photos and videos; a similar percentage (65.92%) share non-Twitter URLs, creating a considerable circulation of genuinely outside content in the Australian Twittersphere. (Again, these percentages amount to more than 100% because many tweets include both Twitter and non-Twitter links within the same post, for instance combining external links with embedded images.)

Patterns through the Day

Overall tweeting activity varies across the day (fig. 2). Probably due to automated posts, differences in timezones, and genuine nighttime activity, volumes never drop below 28,000 tweets per hour, but daytime activity is necessarily considerably higher, especially in the morning and evening. However, during daytime the typical number of unique accounts active per hour hovers consistently between 24,000 and 25,000: daytime fluctuations in tweeting volume are therefore caused not by a net influx of new participants, but by increased posting activity per account.

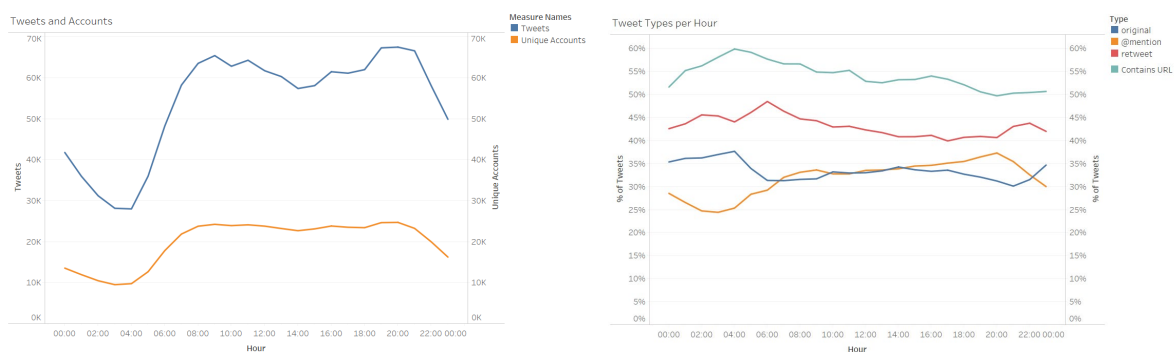


Fig. 2: Tweets and unique accounts per hour (left); tweet types and hashtagged tweets per hour (right)

Such activity is distributed across tweeting types and styles. The fewer accounts active during the early hours post more original tweets and fewer @mentions; clearly there are far fewer Australian accounts active, reducing the potential for @mention engagement, but this remaining core of consistently active accounts might also include a greater proportion of accounts posting automated original messages and/or retweets. By contrast, after 06:00 the percentage of @mentions begins to rise: to 33.61% after 09:00, and then to 37.29% after 19:00. Put simply, through the day the Australian Twittersphere grows more discursive, especially after the conventional workday concludes.

Conversely, information sharing via retweets reaches an early peak of 48.48% of all tweets after 06:00, and then declines almost steadily; the late evening hours see a new increase (to 43.77% after 22:00). This may relate especially to news reading and sharing: as users come online in the morning, they catch up with the news, and retweet some proportion to their followers; similarly, as they end their day, they again engage especially with the latest from Europe and North America, where the day is now also underway. This is somewhat supported by patterns in URL sharing: at 59.88%, the hour after 04:00 sees the greatest percentage of URL tweets, declining to 49.72% after 20:00. The increase in retweeting in the later evening does not coincide with more tweets containing URLs, however. Notably, tweets containing *twitter.com* URLs are remarkably stable throughout the day, fluctuating only between 26.77% and 29.82%: any change in URL tweets is driven almost entirely by tweets linking to external content.

Hashtag use, meanwhile, largely follows overall tweeting volumes. However, the nature of these hashtags changes markedly through the day. We identified 98,696 distinct hashtags, but their popularity follows a pronounced long tail distribution: only 694 were used at least 100 times. Fig. 3 shows the relative prominence of the 25 most common hashtags in each hour, as a percentage of the 58,591 tweets that contained at least one such hashtag. (Percentages add up to more than 100% in each hour, as some tweets use two or more of these hashtags simultaneously.)

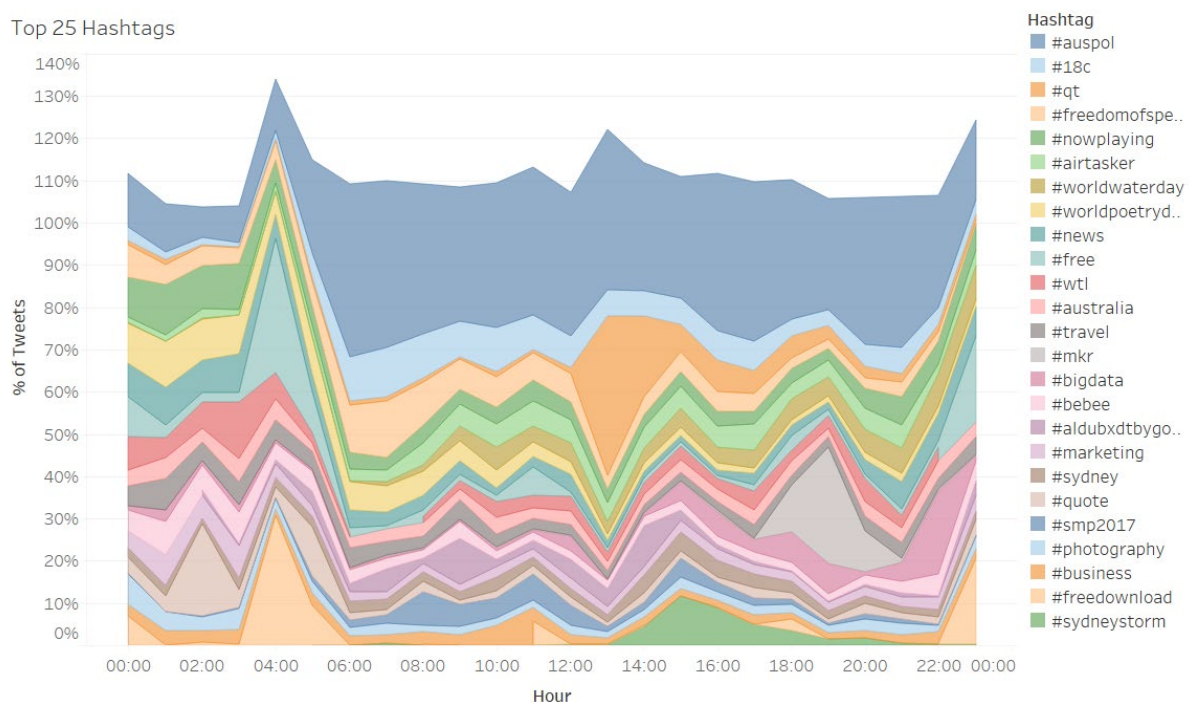


Fig. 3: Tweets using one of the top 25 hashtags, as percentage of all tweets using at least one such hashtag.

The early hours are dominated by hashtags that are relatively atypical for the remainder of the day. Prominent hashtags here include #nowplaying, for instance in automated tweets that announce the tracks broadcast by radio stations in the Nova FM network; #worldpoetryday, in genuine and spam posts that shared content related to World Poetry Day on 21 March; and #wtl, almost exclusively in cryptic tweets from a now

discontinued account. After 04:00, there is also a pronounced spike in #free and/or #freedownload, from a small number of accounts that promote various eBooks and software for search engine optimisation, database management, and big data. (These reappear again after 23:00.) Such patterns suggest that the small hours of the day are rife with bots and semi-automated accounts posting spam and algorithmically generated content.

After 06:00, the picture changes dramatically. From here to the late evening hours, political hashtags are prominent: these include the well-established hashtag for generic political discussion, #auspol (cf. Highfield 2013; McKinnon *et al.* 2016); #18c and #freedomofspeech, for public debates about reducing prohibitions against racial vilification in section 18c of Australia's *Racial Discrimination Act*, supposedly to strengthen Australians' right to "free speech" (McNamara 2016); and #qt, widely used by journalists, political staffers, and other "political junkies" (Coleman 2003) to live-tweet Question Time debates in the Australian federal parliament. The latter is prominent from 13:00, as Question Time itself unfolds, with subsequent discussion continuing through the remainder of the afternoon. Finally, #smp2017, popular during the morning, tracks day two of the annual Science Meets Parliament event, facilitating engagement between scientists and federal politicians.

A handful of other hashtags appear at more specific times. Between 14:00 and 18:00, #sydneystorm waxes and wanes as a major weather front moves across the greater Sydney area; such weather tweets are common in Australia, which is subject to major weather events including cyclones, floods, and bushfires. Between 18:00 and 21:00, the night's broadcast of reality TV show *My Kitchen Rules* attracts a substantial number of participants to its 'official' hashtag #mkr, demonstrating the use of social media for second-screen engagement.

Finally, other terms represent more generic uses of hashtags. #airtasker consists almost exclusively of automated posts by city-specific accounts such as @AirtaskerSYD, @AirtaskerMEL, or @AirtaskerBNE that promote new casual job opportunities posted to the *Airtasker* platform. Meanwhile, hashtags such as #news, #australia, #sydney, #marketing, or #business are often used more to highlight the theme of a tweet than in the expectation that Twitter users will consistently track and engage in such hashtags. Their very generic nature makes them appear in our top 25, but the hashtagged tweets are highly divergent and largely unrelated.

Notably, the four leading political hashtags account for nearly 44% of the total number of tweets containing any of the top 25 hashtags. This documents the considerable visibility of political debate in the Australian Twittersphere, both on this day and in relation to current debates, and in the longer term. But we stress here that the perceived prominence of political topics on Twitter in Australia stems largely from *visibility* rather than *volume*: the 25,592 tweets containing these four political hashtags represent a considerable subset of the 58,291 tweets containing any of the 25 most popular hashtags, or even of the 301,405 tweets containing any hashtags at all, but compare rather more poorly against the total of nearly 1.3 million tweets posted during 22 March 2017.

Australia's political junkies have long used standing hashtags such as #auspol and #qt, and specific hashtags for the topics of the day, to ensure the overall prominence of their issues within the national Twittersphere. Yet users who neither follow these political accounts nor track the hashtags they use may well remain disconnected from such political conversations. Ordinary, everyday, non-hashtagged conversations on Twitter should not be expected to mirror the themes of the leading hashtags: some such tweets may address political themes, but perhaps deliberately eschew prominent political hashtags in order to avoid being drawn into public debates and controversies; others, meanwhile, will address far more niche and mundane topics that, in the eyes of their originators, do not require or deserve the enhanced visibility a topical hashtag might afford. We must find a different approach to identify and understand such non-hashtagged tweets and their communicative functions.

Network of Interactions

The topics of such non-hashtagged tweets might be determined either (with difficulty and potential error, given the brevity of tweets) through computational analysis, or (for small purposive samples but not for the larger dataset) through manual close reading. The scope of the present article, and these considerable practical and methodological challenges, do not permit us to determine the thematic focus of all non-hashtagged tweets; however, a network analysis of account interactions over the course of the day, against the backdrop of the

follower map produced by Bruns *et al.* (2017), provides an opportunity to explore how and why Australian accounts engage with each other on Twitter.

We build this analysis on all @mentions and retweets, independent of whom they engage with; this means that the resultant dataset also includes non-Australian Twitter accounts if they were mentioned or retweeted during 22 March 2017. Further, to focus on the most interactive accounts, we select those accounts that posted or received at least ten @mentions or retweets: that is, we filter the network for nodes with a degree of 10 or more. This leaves 29,172 accounts (nodes in the network), connected by 400,520 @mentions or retweets between 225,244 unique pairs of accounts (edges). Of these, 22,992 accounts (78.82%) are contained in the TrISMA dataset; the remainder are either non-Australian accounts, or Australian accounts created after the TrISMA dataset was established in early 2016.

We visualised this network using the Force Atlas 2 algorithm in *Gephi* (Jacomy *et al.* 2014), and identified a number of distinct network clusters using the Louvain modularity algorithm, at modularity resolution 0.5 (Blondel *et al.* 2018). We further interpreted the thematic focus of these clusters by examining the most prominent nodes in each cluster, and their tweets, manually assigning descriptive labels to these clusters. For this, we reviewed the 100 accounts with the greatest in-degree (the greatest number of @mentions and retweets received) in each major cluster, focussing initially on their Twitter profile information. Usually, this revealed an obvious thematic focus: prominent accounts in the Australian Politics cluster, for example, included several current and former Prime Ministers, other senior politicians, and leading political journalists. Where this assessment of profiles did not produce clear patterns, we reviewed the tweets posted by and at these key accounts. This shed light especially on practices such as Phatic Sharing, which involve a diverse and heterogeneous group of accounts and are unified more by common behaviours than strong thematic focus.

We opted for this close reading approach, undertaken collaboratively between the authors, over formal manual coding because the as yet unknown structure of the Twitter discussions required an inductive and even abductive approach (Dixon 2012) that allowed meaningful descriptors to surface from the data. The thematic categories resulting from this close reading could now be used to inform further detailed coding, also of data from other time periods, to establish precisely the balance between different themes and behaviours and trace how it changes over time, but this further analysis is not central to our present aims.

Fig. 4 shows the result of this process. Table 2 presents key activity metrics for selected clusters.

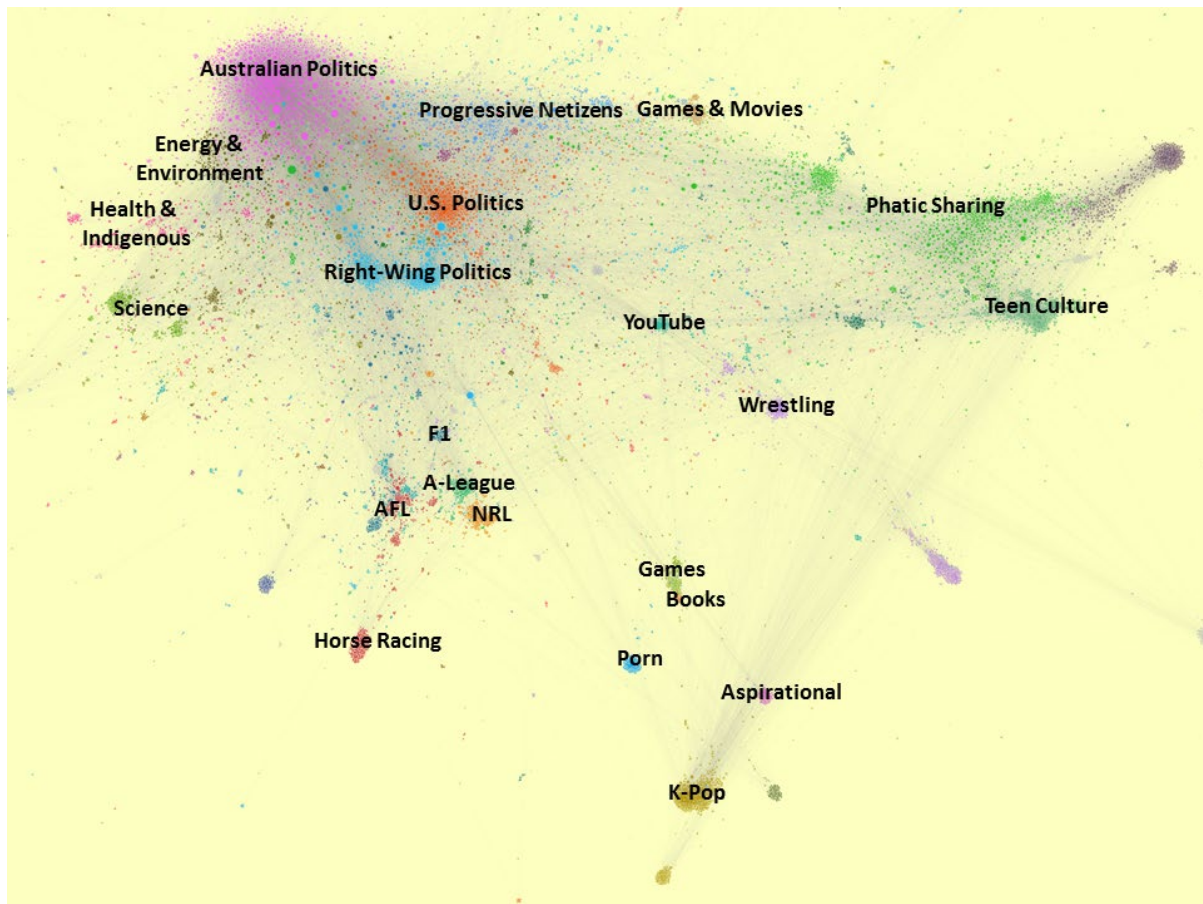


Fig. 4: Network of @mention and retweet interactions, for accounts with degree ≥ 10 . Force Atlas 2 algorithm, Louvain modularity detection (resolution 0.5). Selected clusters labelled following qualitative interpretation.

Notably, many clusters in the single-day interactions network, shown in fig. 4, correspond more or less directly to the clusters of the follower/followee network of 2016 (Bruns *et al.* 2017), shown in fig. 1. This indicates that such longer-term connections have a considerable influence on day-to-day interactions even or especially if hashtags and other affordances are not used as facilitators of connection. We speculate that such clusters would be present in interactions networks for other 24-hour periods, too. Other, often smaller clusters are unique to the interactions network: here, specific events of the day play a greater role in bringing Twitter accounts together in a shared interaction space, and hashtags are important in facilitating the formation of these temporary publics. Such practices are not mutually exclusive: during matchdays, for instance, the stable core of committed football fans in the AFL follower cluster may overlap to a considerable extent with a transient public of more casual sports fans using one or more of the dedicated match hashtags.

A prominent Australian Politics cluster, containing 1,663 accounts, occupies the top left of the interactions network; its most mentioned accounts are leading Australian political figures, domestic journalists, and news media. This cluster is separate from a cluster of 1,067 accounts that focusses on Right-Wing Politics. Here, several conservative Australian news columnists and mainstream and fringe politicians are prominent, but the cluster also includes overseas (mainly U.S.) political accounts such as @realdonaldtrump and @POTUS, far-right and neo-fascist commentators and agitators, and pro-Trump media from *WikiLeaks* to *Fox News*. This ideologically unified cluster, in turn, is separate from a cluster of 941 accounts that addresses general U.S. Politics and contains mainstream media accounts such as the *New York Times*, *The Guardian*, and *CNN*, as well as key journalists, politicians, and celebrities from the U.S. These clusters contain many non-Australian accounts that are not part of the TrISMA dataset and appear here through @mentions and retweets; we therefore interpret these clusters as indicating the considerable attention paid to U.S. political developments, only two months after Donald Trump's inauguration, by both mainstream and far-right Australian Twitter users. Located above them,

in turn, is a cluster of Progressive Netizens: 963 institutional and individual accounts from media and technology fields that largely represent left-of-centre political views.

In these clusters, #auspol is the most prominent hashtag; in Australian Politics, the other major political hashtags are also used regularly, while in U.S. Politics, #trumprussia emerges already, and Right-Wing Politics uses domestic and foreign hashtags such as #18c and #MAGA. Hashtag use varies considerably, however: some 35.36% of tweets by Australian Politics accounts contain a hashtag, but only 10.23% by Progressive Netizens. At 36.85%, the latter group also uses few tweets containing URLs, compared to between 47% and 56% in the other major clusters. By contrast, Progressive Netizens use considerably more @mentions and fewer retweets than other major political groups; retweets are particularly prominent in Australian Politics (70.67%) and U.S. Politics (69.34%). This indicates sharply differing uses of Twitter's communicative affordances: in mainstream political clusters, information sharing and amplification via retweets is common, but ideologically slanted clusters emphasise discussion with (or about) others inside and outside their communities, through @mentions.

Cluster	Active Accounts	Tweets	Hashtagged	Original	@mentions	Retweets	URL Tweets
<i>Phatic Sharing</i>	2,440	88,912	5.29%	23.07%	24.66%	56.16%	48.07%
<i>Australian Politics</i>	1,663	67,493	35.36%	12.68%	37.20%	70.67%	46.71%
<i>Right-Wing Politics</i>	1,067	38,023	23.47%	13.97%	43.41%	57.01%	48.41%
<i>Progressive Netizens</i>	963	24,844	10.23%	22.46%	50.93%	32.59%	36.85%
<i>U.S. Politics</i>	941	34,001	22.11%	11.99%	31.60%	69.34%	52.90%
<i>Teen Culture</i>	938	36,606	14.19%	20.32%	38.67%	53.14%	47.77%
<i>Health & Indigenous Energy & Environment</i>	611	11,966	39.64%	17.05%	37.60%	64.93%	55.04%
<i>Science</i>	597	10,733	44.10%	16.33%	44.29%	59.29%	56.32%
	493	8,090	47.82%	15.86%	56.01%	55.74%	55.33%

Table 2: Key metrics for selected clusters in the interaction network

Towards the fringes of this agglomeration of political clusters are smaller, more topically focussed groups, including Energy & Environment, Health & Indigenous, and Science. Each uses more hashtags and URLs in its tweets (between two fifths and one half of all their tweets contain hashtags); Science in particular features the two major hashtags #SMP2017, for the Science Meets Parliament event in Canberra, and #WSFB2017 (and variations), for the World Science Festival in Brisbane. Only 36.36% of its tweets do not contain a hashtag. The overall Science cluster as detected by the Louvain algorithm subdivides into two communities in the Force Atlas 2 network visualisation, representing these two distinct yet related events.

Overall, we interpret the divergent hashtagging and link-sharing practices within these smaller topical clusters, and their positioning in the interactions network, as indicative of a different, shorter-term nature, in contrast to the larger, mainstream political clusters. The major political clusters represent politics as a longer-term theme: they are well-established *public spherules* (Gitlin, 1998; Cunningham, 2001; Bruns, 2008) whose discussion networks have solidified into the clusters found in the follower network. They still use #auspol to signify their thematic focus, but no longer fundamentally rely on it to facilitate their connection. On any ordinary day, we expect to see these clusters in action much as we have observed them for 22 March 2017. The smaller specialist clusters, however, are *issue publics* (Habermas, 2006; Dahlgren, 2009) formed around short-term topics: they crucially rely on event- or issue-related hashtags to connect interactants, exist in part to share and amplify information on their issues through URL tweets, and disperse again once the event concludes or the issue is resolved. Some users might even engage in multiple such publics at the same time, and act as bridges between them. Many participants in these *ad hoc* publics (Bruns & Burgess, 2015) may eventually return to the longer-term public spherules in which they usually engage, and from which they temporarily departed to participate in the specific activities taking place on 22 March 2017. A conventional Habermasian model of 'the'

public sphere cannot capture these finer details, and continues to relegate “networks for the wild flows of messages” such as social media to “the periphery of the political system” (2006: 415) – yet when we focus on the everyday, mundane communicative practices of ordinary social media users, these networks, and the forms of publics they support, are front and centre.

We suspect similar dynamics of transition between longer-term public spherules and shorter-term issue publics in the agglomeration of sports-related clusters towards the bottom of our interactions network. These clusters again mirror the long-term sports clusters found in the follower network: between AFL (Australian Football), NRL (Rugby League), and A-League (FIFA football), all the major football codes played in Australia are represented here, as are F1 motorsport and (further from mainstream sports) Horse Racing. However, while sports is clearly a permanent feature in the Twittersphere, and participant communities can be regarded as public spherules, such discussions are strongly dynamic as hashtag-driven *ad hoc* publics form around individual sporting events. We note issue publics beginning to form around hashtags such as #F1 and #AusGP ahead of the 2017 Australian Formula One Grand Prix in Melbourne on 26 March, and around the #IRQVAUS match hashtag in anticipation of the FIFA World Cup qualifier in Tehran on 23 March. The following days would likely see relevant clusters swell further in size and activity, before fading away as these events conclude.

Another major community in the Australian Twittersphere can also be found in our interactions network: a Teen Culture cluster, surrounding the frequently mentioned accounts of One Direction and Five Seconds of Summer members and other stars, is located far from the politics clusters. While only 14.19% of its tweets contain hashtags, those hashtags that are used here diverge strongly from themes found elsewhere: hashtags such as #dolantwinsnewvideo, #funkykidsmusic, and #music4kids signal the cluster’s thematic focus.

Situated in close proximity to this Teen Culture cluster is the largest cluster in the interactions network, comprising 2,440 accounts – which is also the most difficult to categorise, however. Remarkably, a full 94.71% of tweets by accounts in this cluster do not contain a hashtag; the twenty most @mentioned and retweeted accounts include pro skating legend Tony Hawk, various meme accounts, and a number of authors and creatives, but also six accounts that have since been suspended by Twitter, two that are now private, and one that has been discontinued for unknown reasons (at the time of writing, almost exactly one year later). Twelve of the twenty most active accounts have been closed, another two suspended and one set to private, while the remainder shows is no obvious thematic focus. Some of these accounts have posted several tens of thousands of tweets during their time on Twitter, but boast only a few hundred followers; therefore, they cannot be classed as microcelebrities (Senft 2013). Several provide virtually no profile information. Finally, much of their activity on 22 March 2017 consists of original tweets (23.07%) and retweets (56.16%), with comparatively few @mentions (24.66%), so their focus appears to be on sharing personal updates or passing on the tweets of others. The number of suspensions might suggest spam networks as driving activity in this cluster, but the pronounced absence of hashtags contradicts that hypothesis, since hashtags are commonly used by spammers to enhance the visibility of their posts. Rather, we interpret the accounts in this cluster as engaging in genuine Phatic Sharing, and have named the cluster accordingly.

We acknowledge the shortcomings of this term. It imposes a single descriptor on what in reality is a collection of diverse but related practices. Phatic Sharing is an example of what earlier researchers might have labelled “banal”, or Pear Analytics classed as “pointless babble” (2009:4), but such disparaging terms have been rightly rejected as valorising only a narrow range of activities. An alternative label could be “shitposting” (McEwan 2017), but that term appears increasingly associated with deliberate attempts, especially by far-right trolls, to derail meaningful discussions by posting offensive and derogatory content (Griffin 2016), and no longer maintains its earlier, more neutral meaning of ‘posting stupid things’. We therefore propose Phatic Sharing as a provisional term for these mundane, everyday practices of posting not-quite-random content, or retweeting the phatic content of others, to present an online persona and maintain its connection to the network beyond. We suggest that further work should identify a range of distinct Phatic Sharing practices.

Together, Phatic Sharing and Teen Culture represent Twitter uses that are very different from practices in the political and sporting clusters: their emphasis is on signalling one’s existence as a Twitter participant, by providing a stream of personal content (original tweets) and shared updates (retweets). This combines, in the

Teen Culture cluster, with frequent professions of fandom for various music and movie celebrities (through @mentions of their accounts). Such activity may be influenced by external events – the release of new music or movies – and manifest in relevant hashtags, but we expect it to persist fairly steadily over time; these clusters likely represent comparatively stable public spherules rather than short-lived issue publics. This is documented for Teen Culture by its substantial presence in the follower network map, but (because of that map’s focus on accounts with at least 1,000 follower/followee connections) not as clearly for Phatic Sharing, where many active participants do not reach that threshold.

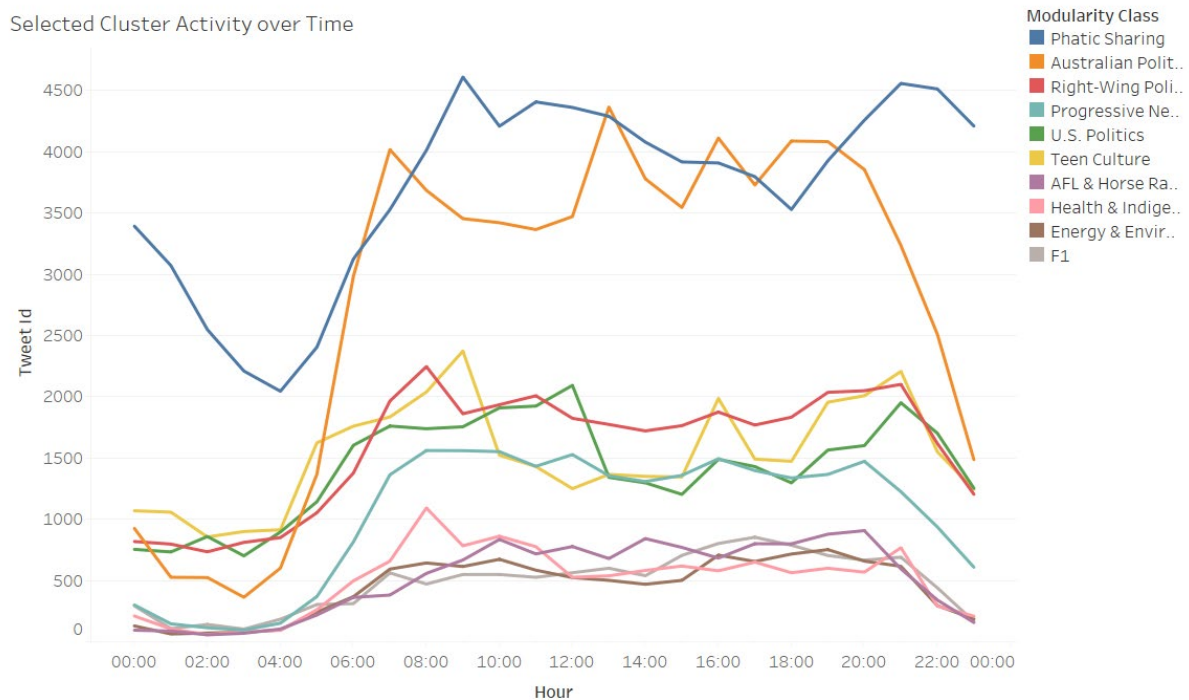


Fig. 5: Tweeting activity by accounts in ten major interactivity network clusters over the course of the day

Hourly activity patterns in the ten major clusters support these interpretations (fig. 5). Phatic Sharing rises to an early peak after 9:00 and then declines towards the afternoon, before a new peak in the after-dinner hours; this suits casual practice during off-peak times at work or at home. Teen Culture shows a similar early peak, perhaps representing students heading to school, and a minor peak after 16:00 which could signify activity on the journey home, and more engagement in the evening but declining after 21:00. Meanwhile, most politics clusters are fairly steady throughout the day, except for a pronounced spike in Australian Politics after 13:00 as Question Time unfolds. U.S. Politics, by contrast, is prominent during the morning, but less so in the afternoon, probably because 13:00 AEST equates to 23:00 EDT; activity returns later in the day, as a new day begins in the United States.

Conclusion and Outlook

In this article, we have provided only a broad overview of activity patterns, and for only a single 24-hour period. However, this already points to several important observations. First, as suspected, there is considerably greater diversity of tweeting within this national Twittersphere than conventional hashtag studies capture: in particular, the highly active yet nonetheless extraordinarily low-key and indistinct Phatic Sharing cluster represents a collection of accounts and tweeting practices that to date have failed to register in other studies. Such practices may contribute a sizeable component to the global volume of tweets; our observations offer merely a glimpse of what ordinary, everyday Twitter users with no interest in news or politics do on the platform all the time. The

methodological difficulties inherent in capturing the intrinsically unremarkable have left these practices severely underresearched.

This addresses our research question 2: the alternative approach sketched out here can reveal previously overlooked but potentially widespread user practices. As Table 2 shows, Phatic Sharers and their tweets clearly could not be investigated by standard hashtag-driven methods, as only some 5% of their tweets contain hashtags; further, given the diversity and idiosyncrasy of what they tweet and retweet, even keyword-based collection approaches would struggle to capture more than a small and unrepresentative subset of their content. Similarly, network-based methods that begin with the most prominent accounts in the Twittersphere also overlook this loosely organised community of Phatic Sharers, as Bruns *et al.* (2017) with their focus on accounts with at least 1,000 global follower/followee connections did: Phatic Sharing is prominent in the Australian Twittersphere, but occurs predominantly in the shadows of the long tail, rather than around those accounts that are exposed to the light by their large follower bases, or that actively seek visibility by engaging with leading hashtags.

Phatic Sharing is therefore emblematic of the mundane, everyday experiences of *ordinary* users: individually, they rarely generate significant impact, by any conventional metric, but collectively they represent a leading use of Twitter – and yet that use remains almost entirely unrecognised by standard data gathering methods that centre on the loudest voices (hashtags) or greatest stars (followers). Only a whole-of-population approach, as implemented in TrISMA or enabled by the global Twitter firehose, can illuminate these hidden practices, at scale, by separating out known communities and examining what remains – and even then only if we approach these datasets without preconceived notions of what is “banal” and what is not.

Second, in comparison with the longer-term follower/followee network, the short-term interaction patterns during our 24-hour window facilitate a tentative assessment of how these two network layers intersect. This answers research question 3: our observations support the view that comparatively stable public spherules on persistent themes in politics, sports, and culture, where the structures of follower and interaction networks mirror each other, coexist with shorter-lived issue publics that emerge around particular topics and events, and that bring together previously unconnected accounts. Within these distinct communities of participants, diverging practices of using the affordances of the platform (@mentions, retweets, hashtags, embedded URLs, etc.) emerge, as appropriate to the interests of the community. This dynamic process of transition between issue publics and public spherules deserves more attention: for instance, under what conditions might *ad hoc* issue publics solidify into persistent public spherules? An empirical examination of such diachronic processes requires far more than a 24-hour dataset, but even our study of a single, comparatively ordinary day may have captured such a process at an intermediate stage, as *ad hoc* discussions about the Trump Presidency solidify into a longer-term community examining collusion between the Trump campaign and its foreign enablers. These dynamics speak in important ways to the wider question of extracting broader meaning from onlife traces: the solidification of short-term issue publics into longer-term public spherules on Twitter likely mirrors the crystallisation of the interpretive frames through which society at large approaches a given topic, even if the specific demographics of Twitter may result in divergent sets of frames.

Finally, this article also demonstrates the opportunities and difficulties in working with ‘big social data’ from leading social media platforms as we pursue the everyday, mundane onlife traces embedded in ordinary users’ activities. To address research question 1, we deliberately pursued a mixed-methods approach that combined initial timeseries, statistical, and network analysis with extensive close reading and qualitative interpretation. This abductive approach (Dixon 2012) is appropriate at a stage of research that focusses on the formation rather than testing of hypotheses. Such interpretation requires a solid understanding of what may be contained in the data, however, and cannot be easily replicated at a much larger, possibly transnational, multilingual scale. A purely computational, quantitative approach to the dataset might have overlooked some finer details in the data, or dismissed the amorphous Phatic Sharing cluster simply as ‘pointless babble’. It remains necessary to develop, test, and apply new methods for capturing more than what is already known about Twitter users’ practices, focussing especially on the everyday and apparently unremarkable; to examine and interpret such practices through a combined quantitative and qualitative perspective that allows for the unexpected; and

finally to channel these observations into testable hypotheses about the longer-term dynamics of Twitter use. We are still a considerable way from reliably extracting meaning from these observational online traces, but this incremental, explorative, abductive process drawing on mixed methods for the analysis of complex datasets is likely to be critical as we proceed.

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