

UK General Election 2015: dealing with austerity

Massimo Ragnedda and Maria Laura Ruiu



Massimo Ragnedda (PhD) (massimo.ragnedda@northumbria.ac.uk) is a Senior Lecturer in Mass Communication at Northumbria University, Newcastle, UK where he conducts research on the digital divide and social media. He has authored seven books with his publications appearing in numerous peer-reviewed journals, and book chapters in English, Spanish, Italian and Portuguese texts. His books include: *Theorizing the Digital Divide* (co-edited with G Muschert), Routledge (forthcoming); *The third Digital Divide: a Weberian approach to Digital Inequalities* (2017), Routledge; *The Digital Divide: The Internet and Social Inequality in International Perspective* (co-edited with G Muschert) (2013), Routledge.

Maria Laura Ruiu (PhD) (maria.l.ruiu@northumbria.ac.uk) is currently a doctoral student in Social Sciences at Northumbria University, Newcastle, UK. Her first PhD investigated the social dynamics of co-housing communities and she worked as a post-doctoral researcher at the Desertification Research Centre (NRD), University of Sassari. Her research interests are in urban and environmental sociology with a specific focus on climate change adaptation strategies and water governance, climate change communication, social capital, housing systems, social movements, and dissemination-related issues. She is the author of several papers that have appeared in peer reviewed journals.

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UK General Election 2015: dealing with austerity

Massimo Ragnedda and Maria Laura Ruiu
Northumbria University

Abstract

This article investigates the nature of the conversation around austerity on Twitter during the 2015 general election in the UK. Specifically, it explores the kinds of messages referring to austerity, as well as the kinds of accounts involved (whether they referred to a private or public role on Twitter and in society) and their affiliation to politically or non-politically oriented organizations/bodies. The search on Twitter concerning the austerity topic (for the 39-day time period from 3 March to 8 May 2015) resulted in 16,015 tweets, which generally referred to austerity, and 11,146 tweets, which contained at least one relevant hashtag.

While austerity was rarely mentioned by mainstream media accounts in the Twittersphere, this topic was widely discussed during the election campaign by private users. This could be seen as a limitation of agenda setting, since there is no correlation between the agenda set by the media on Twitter and the public discussion about it. However, we found a relationship between the offline mainstream media agenda and the discussion led by private users on Twitter, thus confirming, to some extent, the validity of intra-agenda setting. In fact, offline media events (talk shows, news articles and question times) seemed to trigger peaks in tweet-based discussions or mentions about austerity, showing that the agenda set by the offline media influenced the discussion in the Twittersphere. Finally, we found that, while austerity has clear implications for citizens' daily life, it seems to be more of an "elitist" topic, mainly addressed by those who are already politically oriented and well informed on the topic.

Keywords

Twitter, austerity, UK General Election 2015, agenda setting

Introduction

The recent growth in the use of social media platforms provides a favourable reference point from which to study relevant sociopolitical trends. Digital media has fostered a proliferation of ways in which citizens have the opportunity to gather, share and comment on political information (Ragnedda 2017), or to enjoy opportunities never before possible in terms of political marketing. The digital traces of communications and opinions from

both politicians and citizens, stored and searchable on the Internet, can and should be the subject of rigorous empirical research.

The use of social media as a source of data on public opinion has been increasingly adopted in different fields, such as politics, linguistics, complex systems and the environment (Lineman et al., 2015). One of the main advantages of retrieving data from Twitter, in comparison to other social networks (such as Facebook), is that around 90% of Twitter accounts are public and accessible (Tufekci, 2014). More specifically, the use of Twitter during election campaigns has been deeply analysed and researched from a number of perspectives, producing different findings (Parmelee and Bichard, 2012; Gainous and Wagner, 2014; Jungherr, 2015). Despite the wide range of perspectives, approaches and conclusions, it is possible to identify three main thematic areas (Jungherr, 2014):

- a) The use of social media by politicians and activists, which takes into account the reasons why they open an account (Golbeck, Grimes and Rogers, 2010; Peterson, 2012), the way it is used (Graham et al., 2013) and the effect on the public (Parmelee and Bichard, 2012).
- b) Online reaction in the presence of mediated events, including televised debates (Chadwick, 2013; Lin, Keegan, Margolin and Lazer, 2013).
- c) The study of the content published by different “publics” during election campaigns, such as political research on the use of social media by voters, the identification and categorization of the content of messages posted by users (Bae, Son and Song, 2013), and the study of the networks of interaction between politically active Twitter users (Conover et al., 2011; Smith et al., 2014).

Our research fits into the last two categories. Indeed, the aim of this research is to investigate the nature of the conversation around austerity on the Twitter platform, by both analysing the network of interaction between users and politicians and focusing on the content of messages, as well as considering the online reaction to media events. Specifically, we are interested in exploring the kinds of messages referring to austerity, in which users are more actively discussing this topic and their affiliation to politically or non-politically oriented organizations/bodies. The aim is to understand whether or not the conversation on austerity is triggered from the bottom up or top down, whether or not it is an “elitist” topic or overwhelmingly discussed by all users, and which political parties are regarded as the main forces in challenging austerity.

In order to shed light on this topic, we first need to provide a short literature review on the use of social media, and Twitter in particular, during political campaigns; second, we need to clarify the methodology used to collect and elaborate data; results will then be presented and discussed; and, finally, some conclusions will be drawn.

Using Twitter for political purposes

The use of social media to promote citizens' engagement in political and civic life has been widely studied (Boulian, 2015; Valenzuela et al., 2016; Vraga, 2016; Ruiu and Ragnedda 2017). This is particularly evident in the case of protest-type activities, during which a positive and direct correlation between these activities and social media uses has been found (Valenzuela, 2013; Scherman et al., 2015; Wells and Thorson, 2015). The fact that participation in protest-type activities is affected by reading and posting political content (Valenzuela et al., 2016) proves, to some extent, the importance of using social media to mobilize citizens to participate in political life. This is also in line with our data, which show a high involvement of "private accounts" in the political campaign under discussion. Posting news, ideas, petitions and calls for action on social media has become increasingly popular among associations, charitable organizations, candidates and political parties. However, the interest in the use of social media to mobilize citizens to engage in political and civic life is not limited to protest-type events. Indeed, analysing the potential impact of social media on political campaigns has dramatically increased in popularity and resulted in a number of research studies (Conway, Kenski, and Wang, 2013; Hosch-Dayican, Amrit, Aarts, and Dassen, 2016; Dolezal, 2015; Oelsner and Heimrich, 2015). As a general rule, it seems that candidates and political parties tend to use Twitter to mainly provide links to their own websites, as well as post news and updates on their campaign activities (Small, 2010; Macnamara, 2011; Graham, Broersma, Hazelhoff, and van't Haar, 2013; Evans et al., 2014; Graham, Jackson, and Broersma, 2014; Hosch-Dayican, Amrit, Aarts, and Dassen, 2016). This is valid during non-election time, when there is a need to be "present" in the media arena, and during election time, when there is a need to redirect followers to their own websites in order that they will become more informed. Using Twitter in this way seems to be more related to a broadcasting model (Ahmed and Skoric, 2014; Evans et al., 2014; Graham et al., 2013, 2014; İkiz et al., 2014; Jaidka and Ahmed, 2015; Kruikemeier, 2014; Suiter, 2015), rather than Web 2.0 uses, in which interactions and discussions are vital elements.

Furthermore, while governing parties are more likely to use Twitter in a broadcasting style (Bruns and Highfield, 2013; Ahmed and Skoric, 2014; Larsson and Kalsnes, 2014), supporters of governing parties tend to use Twitter less intensively than supporters of opposition parties (Hemphill, Otterbacher, and Shapiro, 2013; Plotkowiak and Stanoevska-Slabeva, 2013; Vergeer and Hermans, 2013; Ahmed and Skoric, 2014; Jaidka and Ahmed, 2015). These findings seem to reflect the idea that using Twitter for political purposes is, somehow, connected to specific political affiliations. Reviewing the European elections of 2014 and the general election of 2015, both in the UK, Lilleker et al. (2015) found that left-leaning candidates and parties tended to use Twitter more than other candidates or parties. This could be seen as a general trend, since opposition parties and candidates are typically vocal in order to "oppose" the governing parties and assert their presence in the media arena, so as to enhance their visibility. These findings are also confirmed by our analysis, at least in relation to austerity.

Moreover, the use of social media seems to be influenced by socio-demographic factors, such as education (Valenzuela, 2013; Wells and Link, 2014; Vaccari et al., 2015; Gainous et al., 2016) and age (Bode et al., 2014; Gainous et al., 2016), indicating that less-educated people are unlikely to use social media in order to share political content (Bode and Dalrymple, 2014; Vaccari et al., 2015; Vraga 2016) or become politically engaged (Valenzuela, 2013; Valenzuela et al., 2016; Vraga, 2016). More specifically, older users are less likely to use social media, whereas younger users are less likely to participate in political activities (Saldana et al., 2015; Vraga, 2016). However, younger politicians are more likely to be active on Twitter than older ones (Straus et al., 2013; Vergeer and Hermans, 2013). Furthermore, several research studies have shown an “in-group” tendency, given that interactions are more likely to appear between candidates who share the same political ideology (Hsu and Park, 2012; Plotkowiak and Stanoevska-Slabeva, 2013) or towards journalists (Ahmed and Skoric, 2014; D’heer and Verdegem, 2014). Furthermore, some studies have shown that citizens tend to select topics and trends to follow, which are in line with their own views (Gainous and Wagner, 2014; Bode and Vraga, 2015). At the same time, the discussion around a specific topic is frequent, even across party lines (Heatherly et al., 2016).

Against this theoretical background, we attempt to investigate if and how the discussion about austerity during the 2015 general election in the UK came from the bottom up (private users) or top down (candidates), as well as how (and if) it reached the mainstream media or, conversely, it came from the mainstream media, which sets the agenda for topics to be discussed online (Kingdon, 2003). Furthermore, we attempt to investigate the “why”, “how” and “who” concerning the discussions about austerity in the Twittersphere in this context. Inter-media agenda setting has been widely explored by focusing on the interrelationships between different “traditional media” agendas (see, e.g., Golan, 2007; Vliegenthart and Walgrave, 2008), as well as on the reciprocal influence of the political agenda and the media agenda during an election campaign (Lopez-Escobar et al., 1998; Dunn, 2009; Lancendorfer and Lee, 2010). An increasing number of studies has examined the interrelationships between the “mainstream media” and the “new media”, finding reciprocal influence in the process. In some cases, it has been found that online arenas (such as in the case of the “Climategate” scandal) have influenced the debate in the print media by attracting its attention and “imposing” the use of specific terminologies (such as “Climategate”) (Hellsten and Vasileiadou, 2014). Other studies have focused on the relationship between the mainstream media and Twitter during election campaigns (Bruns and Burgess, 2011; Burgess and Bruns, 2012; Larsson and Moe, 2012; Conway, Kenski and Wang, 2015). In this context, Conway, Kenski and Wang (2015), found that Twitter and traditional news media have a reciprocal influence, with different degrees of intensity and duration in relation to a specific issue. However, they also highlight that, during an election campaign, Twitter can be used by politicians and the public to establish an agenda, which, in turn, shapes the media agenda. In a similar way, the present research found some correlations between the traditional offline media agenda and Twitter conversations.

Methodology

Several studies have conducted similar research on social media platforms, such as Facebook (Larsson and Kalsnes, 2014; Williams and Girish, 2012), or by comparing different platforms (Enli and Skogerbo, 2013). However, this analysis focuses on Twitter, which, since 2009, has progressively shifted its function from a platform for facilitating connection and networking among friends (and “new” contacts) to a platform for posting commentary and personal interpretation of “ongoing facts” (Stone, 2009). This means that Twitter could represent a privileged platform on which political discourses take shape.

The standard approach to data collection is to download tweets containing the same keyword (or hashtag), or those produced from a list of specific users. Data can be analysed using a variety of techniques, which are broadly attributable to the following main approaches:

- a) The content, i.e., the tweet as a textual document, analysed using methods such as content analysis or sentiment analysis (Ceron et al., 2014).
- b) The relationship between the content and users, such as the measurement of engagement or the interest prompted by a tweet or a hashtag, with a view to quantitatively describing the effectiveness of a communication (Gerlitz and Lury, 2014).
- c) The relationship between users or the network of interactions between them, so as to reconstruct and interpret the composition of social networks on Twitter, which, in turn, can be stable over time or more fluid, for example, as a result of a retweet or a mention (Bruns and Burgess, 2012).

We moved across these three main approaches without embracing any one in particular or adopting a descriptive perspective. Our primary research question regarded the nature of the conversation on austerity in the Twittersphere, in terms of whether the conversations on this topic were triggered from the bottom up or top down, as well as whether austerity can be regarded as an “elitist” topic or overwhelmingly discussed by all users. In order to do this, we adopted a “three-category approach” based on frequency, association and categorization. More specifically, the issue of “why” was analysed in relation to “frequency”, the issue of “how” was analysed in relation to “association”, and the issue of “who” was analysed in relation to the “categorization” of tweets.

Hence, our research questions were:

- Why did some “top users” engage with the austerity topic?
- How was the austerity topic connected to other socially related issues?
- Who were the key users involved in the austerity debate?

Therefore, our research process followed three phases:

- a) *Frequency*: We identified the specific days during which austerity was more frequently discussed in order to analyse the level of interaction (if any) between

media events and the Twitter discussion. This analytical approach was chosen in order to understand why, on some days, this topic was more popular than on other days.

- b) *Association*: We identified keywords or topic that are more frequently associated with “austerity” in order to understand “how” austerity was seen in relation to social inequalities, poverty or the welfare state.
- c) *Categorization*: We classified users who used austerity as a keyword and/or the hashtag in order to identify political parties/candidates who were seeking to attract “voters” (top down), or private users who were trying to influence the political and media agenda (bottom up). In other words, the aim was to identify those “who” were more active at discussing this topic in the Twittersphere.

In terms of data collection, we first filtered the “ge2015” sample for the word “austerity”. Within this database, we collected tweets that contained the word austerity for the 39-day period of the election campaign from 3 March to 8 May 2015. By filtering the “ge2015” sample for the word “austerity”, for the same 39-day period, we obtained a data set of 16,015 tweets, which broadly refer to austerity.

Secondly, narrowing down the wider data set to tweets containing at least one hashtag, we obtained a new data set with 11,146 tweets. More specifically, when users used hashtags containing the word austerity, the majority referred to #austerity in general (2,152), #endausterity + #endausteritynow (262), #antiausterity + #antiausterityalliance (195) and #austeritymax (70).

Thirdly, in order to capture the users who were more involved in tweeting activity, we focused on those who sent at least 15 tweets on the topic (up to 58). By private users, we mean those who were not directly connected to any political party, public institution, organization or NGO.

Results and discussion

In terms of the role played by mainstream media accounts in the Twittersphere, we found that the accounts of the BBC and other leading media organizations did not appear to be among the main users addressing the topic of austerity on the social media platform. As shown in Table 1 (which considers users who sent between 15 and 58 tweets in the last two weeks of the election campaign), the majority of tweets were sent by private actors who were connected to the left wing (in particular to the SNP) or were activists. Our data are in line with the research carried out by Lilleker et al. (2016), which underlined how the majority of tweets come from left-leaning candidates or parties in opposition. This aspect will be further discussed when reporting the results for the “categorization” category.

Affiliation/support/engagement	Actors (n. 61)			Total
	Not specified	Private	Public	
Activism	-	124	54	178
Community Psychology	-	-	17	17
FBU	-	-	39	39
General election	-	-	16	16
Green Party	15	71	-	86
Green Party, SNP, and Plaid Cymru	-	87	58	145
Labour	-	72	-	72
Left wing	16	171	30	217
Not Specified	61	76	26	163
Plaid Cymru	-	58	82	140
SNP	39	110	18	167
TUSC	-	-	123	123
Volunteering	-	-	18	18
Total	131	769	481	1381

Table 1. Count of “top tweeters” by type of actor and their affiliation/support/engagement

It is relevant to highlight that the discussion about and around the topic of austerity came mainly from “private accounts”, rather than the mainstream media. This observation helped us to answer one of our research questions, namely, whether such a topic is generated from the bottom up (private accounts) or from the top down by either the mainstream media or candidates who wish to use this topic to engage their followers in a political discussion. It seems that austerity is not “imposed” by the mainstream media, thereby (apparently) contrasting with the agenda-setting theory, according to which public opinion is shaped by the media agenda. Furthermore, our analysis indicates that this topic was only partially imposed by candidates who, presumably, did not find discussing austerity to be vital to their political communication strategies. Discussion on this topic was therefore mainly initiated by private accounts in order to influence the agenda of both politicians and the media (online) by inviting them to talk about austerity. In order to dig deeper into the validity of agenda setting when applied to Twitter, we also looked at the correlation between the mainstream media and the number of tweets about austerity. It emerged that there was indeed a match between media events, such as leaders’ televised debates or articles in the most popular newspapers, and the peaks in tweets related to austerity. Figure 1 plots the time series of the tweets by highlighting certain peaks in relation to specific events. As we can see, there was a peak in the number of tweets containing austerity as a keyword or hashtag alongside politically related media events. It

is worth nothing that, even though the austerity topic was rarely mentioned by mainstream media accounts on Twitter, discussing it in televised debates or newspaper interviews did trigger a Twitter conversation. This is further confirmed by the fact that, on 29 April, following an article by Paul Krugman in *The Guardian* called “The Austerity Delusion”, there was a peak in the number of tweets mentioning austerity. This observation seems to be consistent with the agenda-setting theory, since the discussion about a specific topic (in this case, austerity) is set by the media.

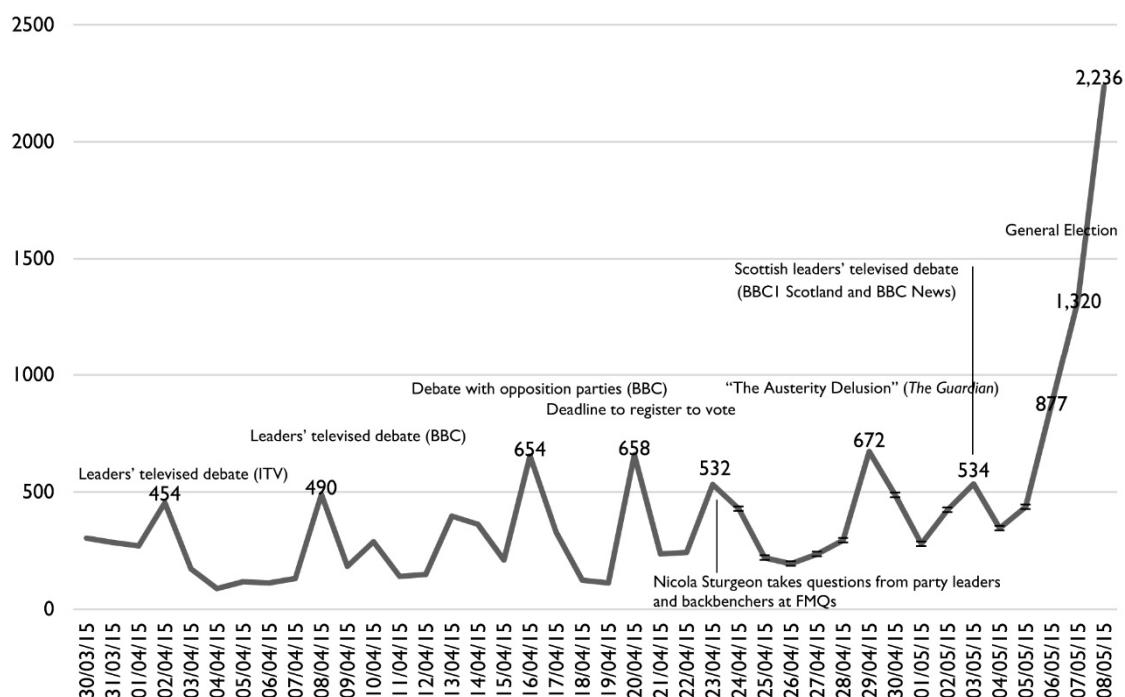


Figure 1. Tweets mentioning austerity through the election campaign period and peaks in relation to specific events and media reporting

The strong relationship between the increase in the number of tweets and media events is shown in Table 2, which indicates not only a significant correlation between these two variables, but also increased posting on specific days of the week. This was particularly evident on both the second and fifth days of the week, while posting was not significant on Saturdays, suggesting that tweeting on the austerity topic was more related to working days. However, when focusing on the distribution of tweets throughout the day (Figure 2), we see that activity was distributed across the entire day, albeit with some peaks (and drops) during working hours (09:00-18:00) and dinner/evening time (19:00-21:00). The dependent variable is the logarithm of the number of daily tweets from 30 March to 8 May, with the media event variable being a dummy variable equal to 1 when the event occurred. In regression, a linear trend was introduced in order to rule out those results that were, in some way, influenced by the presence of a trend in the number of tweets on the subject. We can also report the results of a Shapiro-Wilk test of normality, which was carried out on residuals of the regression. As a consequence, the null hypothesis of normal distribution cannot be rejected, which means that the statistical inference of the model is

not compromised by the violation of this assumption. Moreover, given that the number of days on which we followed tweets was not very high, the results in Table 2 suggest that, in the case of one-day events, an average of around 93% of tweets related to such events occurred on days after they had taken place.

Dependent variable: log of the number of daily tweets	
media_event	0.935*** (0.156)
day_of_the_week	.
Sunday	REF.
Monday	0.586*** (0.207)
Tuesday	0.624*** (0.209)
Wednesday	0.512** (0.212)
Thursday	0.590** (0.219)
Friday	0.792*** (0.207)
Saturday	0.140 (0.218)
trend	0.023*** (0.005)
_cons	4.549*** (0.179)
<i>N</i>	40
Adj. <i>R</i> ²	0.762
Breusch-Pagan/Cook-Weisberg test for heteroscedasticity on the residuals	
Ho: constant variance	
Chi ² (1)=2.27	
Prob.>chi ² =0.1320	
Shapiro-Wilk W-test for normality of residuals	
W=0.96	
V=1.578	
z=0.960	
Prob.>z=0.16	
Standard errors in parentheses	
* <i>p</i> <0.10	
** <i>p</i> <0.05	
*** <i>p</i> <0.01	

Table 2. Relationship between tweets and media events/days of the week

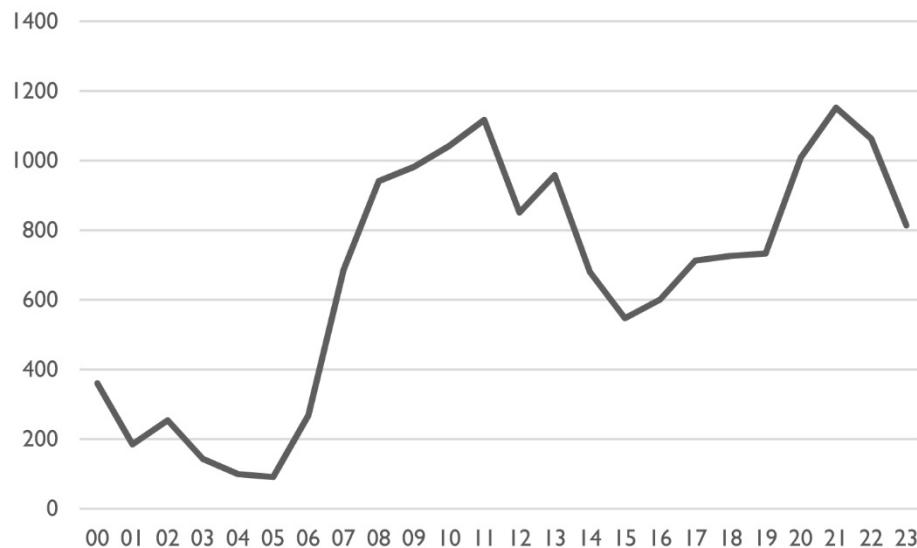


Figure 2. Distribution of tweets mentioning austerity throughout the day

Frequency

When analysing tweets with a focus on frequency, we identified some factors of noteworthy relevance. Figure 3 presents the hashtags that were more frequently used within the wider data set containing the word austerity (16,015). All tweets referred to austerity; in 12.79% of cases, the word was also used as hashtag. As we have seen, within this data set, 70% of tweets (11,148) contained at least one hashtag. Not surprisingly, since all data were extracted from a data set containing the term general election, 99% of these tweets contained the hashtag #ge2015. More specifically, when aggregating the tweets that used hashtags referring to different political parties, we can see that 45% of tweets specifically named parties (by using hashtags), thus implying the respective political parties were responsible for this issue. When digging deeper into the tweets that included a hashtag (11,146 tweets), we can see that the political parties, which were most addressed with the hashtag austerity and, by implication, regarded by users as the most interested in this topic, were as follows: #SNP (21%), #PlaidCymru (8%) and #Green Party (7%). Meanwhile, #Labour and #Tories were less frequently mentioned in this discussion (respectively, 5% and 3% of the tweets included these party hashtags)¹. These data are quite surprising because we could have expected that Labour would have been one of the parties called to take action against austerity, while it would have been reasonable to assume that the Conservatives (Tories) should have been held responsible for the age of austerity, since it had been introduced by their party leader, David Cameron.

¹ When considering the tweets that only include a hashtag naming a political party (5,005), #SNP is mentioned in 46% of the hashtags used in such tweets.

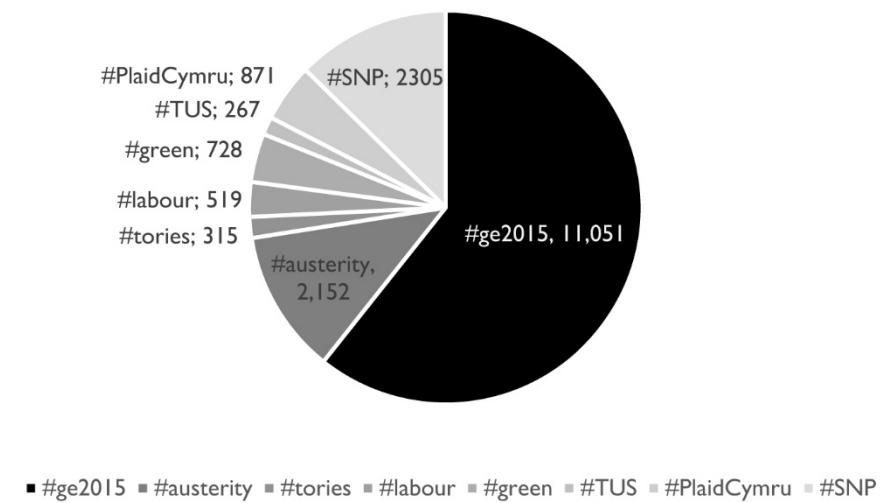


Figure 3. Count of tweets with a political hashtag

In the same vein, we focused on candidates/parties that were addressed when users talked about austerity (Figure 4). One of our first findings was that the most cited political figure was the leader of the SNP, Nicola Sturgeon, followed by Cameron, Jim Murphy, Leanne Wood and Ed Miliband. This is probably related to the fact that the SNP was regarded as one of the parties most concerned about austerity. It is noteworthy that, although Miliband was the Labour leader in Westminster, Murphy and the Scottish Labour Party (which is much smaller in terms of voters and followers on Twitter compared to the UK party) were more often cited in the austerity debate. As anticipated above, this could suggest that the Labour Party was not perceived as a political force capable of challenging the “age of austerity” initiated by the Conservatives. Furthermore, among the variety of hashtags employed by users, #votelabourgetausterity (which was used 12 times, while the hashtag #votetorygetausteritymax was used 21 times) suggests that Labour, according to some users, not only failed to challenge austerity, but was seen to be in favour of it. It is also significant that the leader of the Liberal Democrats, Nick Clegg, was mentioned only a few times (4), while Natalie Bennett, the Greens’ leader, was cited only five times, despite her party being one of the most frequently mentioned.

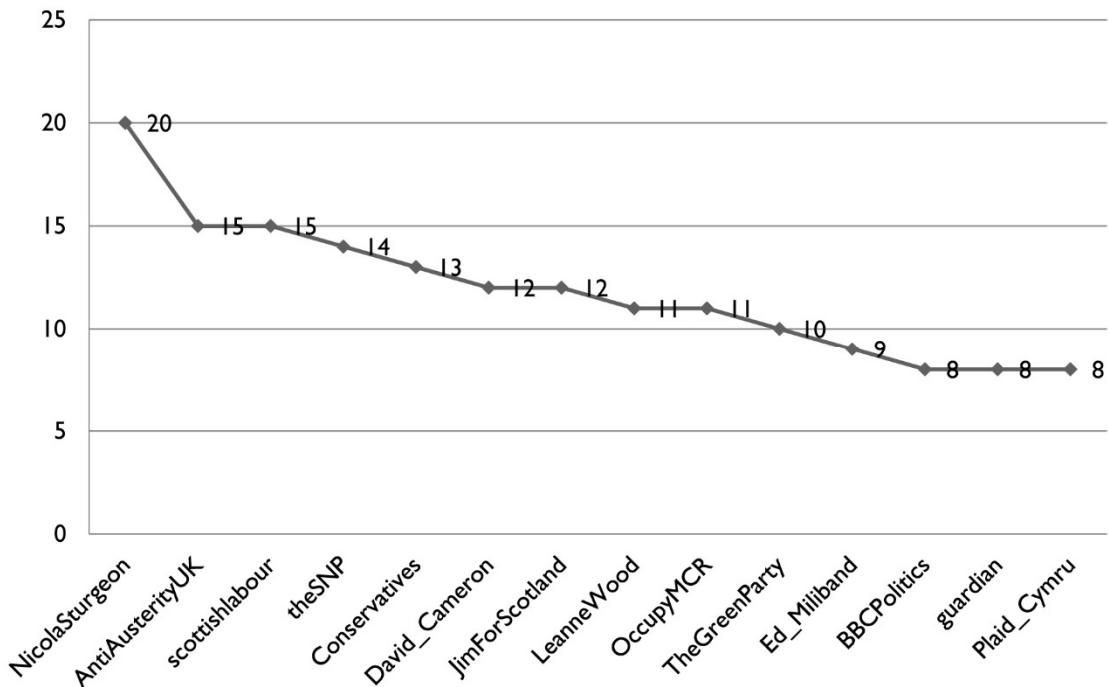


Figure 4. People, parties and media organizations most cited by Twitter users

As the most cited leader was Nicola Sturgeon, it was appropriate to explore those tweets referring to her. When analysing them, it is possible to see that her name was mostly related to anti-austerity or ending austerity and the SNP manifesto (Figure 5). At the same time, even though these tweets were less frequent, her name was also associated with the spending scandal in which she was involved. In fact, in the last week of the pre-election period, she hired a helicopter in an attempt to enhance the effectiveness of her campaign. Tweets on this topic were negative and condemned her behaviour by contrasting it with her anti-austerity message. However, the small number of tweets on this topic could also be explained by the fact that our analysis ended on election day; thus we have no further data.

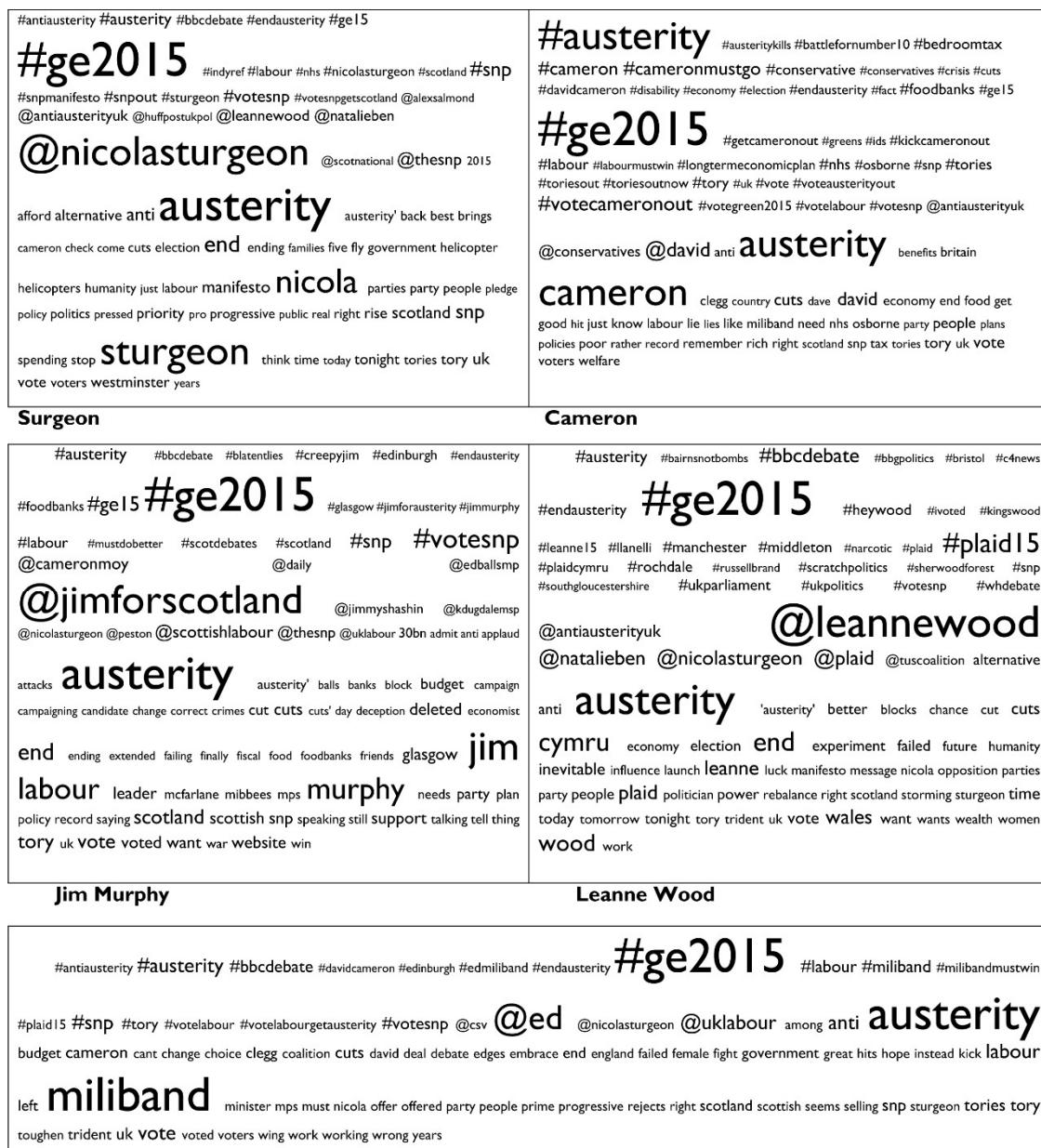


Figure 5. The most cited words in tweets referring to politicians

Association

Our second phase was to analyse tweets with a focus on association by identifying keywords or topics that were more frequently associated with “austerity”. We looked at the economic consequences of austerity and, more specifically, analysed how this topic was seen in relation to social inequalities. We aggregated certain hashtags, such as #food-banks (110 tweets), #poverty (79), #childpoverty (31) and #inequality (23), under the “poverty” umbrella term. Even though this represented a limited percentage, poverty and inequalities represented an area of major concern for people who talked about austerity-related issues. In order to understand the nature of the discussion around “poverty” and

“austerity”, we referred to tweets connected to the topic in general and to different hashtags, which can be considered as examples:

“RT @BrechinSNP: Tory and Labour austerity measures will lead to further poverty #VoteBardell #VoteSNP #GE2015 <http://t.co/YwHJittVCV>” (private account, GE 2015).

“Poverty is increasing particularly for children Austerity cuts take from poor To benefit the rich #VoteSNP  #GE2015 <http://t.co/d44taVdwlt>” (private account, GE 2015).

“#GE2015 The #coalition's legacy? The rich are richer and the poor are using #foodbanks <http://t.co/EmSQoRaSr2> #BattleForNumber10 #austerity” (private account, GE 2015).

“RT @YEqual: #NickClegg Lied about #TuitionFees #BedroomTax #ChildPoverty #Austerity He Sold his soul 4 a ministerial job #GE2015 <http://t.c...>” (private account, GE 2015).

“Two thirds of economists say Coalition austerity harmed economy <http://t.co/XAtVFVNc8y> #leadersdebate #ge2015 #poverty #battlefornumber10” (private account, GE 2015).

“#GE2015 #inequality #Austerity #Privatisation #Gentrification #QE: Britain's richest double their wealth in 10 years <http://t.co/UvtzEt4bmO>” (private account, GE 2015).

The above-mentioned tweets are, in some ways, emblematic of the discussion that took place in the Twittersphere. As such, it is notable that such topics, which were previously at the centre of Labour politics, are seemingly no longer connected with this party. At least, this is true for the Twittersphere and in relation to the austerity topic. This observation could even prompt a more rigorous debate among political scientists. Finally, in terms of association, we need to mention that, in the case of Jim Murphy (Scottish Labour) and Leanne Wood (Plaid Cymru), the most associated words were related to the end of austerity (see also Figure 4).

Categorization

Finally, moving onto our third topic of categorization, and in order to understand whether austerity was a “topic” that was more referred to from the top down (by candidates or the media) or the bottom up (by private accounts), we classified users who used austerity as a keyword and/or hashtag. Table 1 (which includes users who sent at least 15 tweets containing some reference to austerity) reports on whether tweeters had any ties to a political party, media account or organization. It is noteworthy that only 61 users tweeted or retweeted a message related to austerity at least 15 times. This suggests that, while the number of tweets about austerity was high, the number of users interested in extending the argument was limited. This could suggest that austerity was perceived to be a sophisticated topic. More specifically, we found that, among the 1,381 tweets sent by this smaller sample (i.e., the most active users), the majority of users were linked to the centre-left wing in general, and more specifically to the Green Party, SNP, Plaid Cymru or the Trade Unionist and Socialist Coalition (TUSC) (see Table 1). Although those in the unspecified category regarding affiliation/support/engagement were not clearly linked to

any political wing, they expressed a clear position against austerity. Moreover, the majority of tweets were sent by private accounts, which were connected to the left wing (in particular to the SNP) or were owned by activists. This could also indicate that austerity was discussed and contested from the bottom up by private accounts/organizations, which were, in some way, connected with leftist platforms. Hence, both the limited number of users who could not be classified as actors or affiliates and the number of users who could be categorized as left wing perhaps indicate that the majority of people who talked about austerity were already politically oriented and well informed about the topic. This prompted us to reflect on the fact that, although austerity impacts on citizens' daily life, it could be regarded as an elitist topic, which is not relevant in the public domain nor discussed by mainstream media accounts on Twitter. This hypothesis was also confirmed by the fact that, among the tweets analysed (Table 1), there were no profiles connected to the media. At the same time, users often referred to specific political parties when they talked about austerity in either positive or negative terms. The majority of tweets that condemned austerity referred to the possibility of perpetuating the level of austerity initiated by the party in office. By contrast, the tweets that wanted to celebrate the end of austerity referred to the political manifestos of the parties in opposition. Particularly among parties on the left wing, this "topic" was used to attract potential voters and push them to side against the right wing.

Digging deeper into the categorization theme, the analysis of the tweets showed some emerging themes and sub-themes connected to the austerity topic. Table 3 presents a range of macro-topics, such as welfare, the economy, change, inequalities and social exclusion. Even though the explicit reference to government activity was limited in comparison with other categories, the majority of tweets implicitly referred to the current government's way of working. In fact, austerity was often described in terms of a continuous process of governing the UK. The number of tweets that referred to "change" and "alternatives" offers further evidence of such malcontent. However, the majority of tweets related to government activity was also related to public expenditure. Climate change was less frequently connected to the austerity topic, although it was specifically connected to the Green Party manifesto, which called for ending austerity and tackling climate change. The "no austerity" category was one of the largest in relation to general references to the issue. Tweets referencing poverty and social inequalities represented an area of major concern for people who were actively involved in discussions about the general election.

Theme*	Sub-theme	Sub-theme	References	
			352	
Welfare	Poverty	Food Bank	26	
		Community Threat	7	
		Bank	3	
	Health	Austerity effects on public services	19	
		Austerity effects on health	5	
		Health experts	4	
	Housing		16	
	Employment		18	
		Pension	3	
Economy	Education		6	
	Privatisation		6	
	Inefficiency of justice		2	
			199	
No-Austerity	Debt		23	
	Tax		20	
	Deficit		16	
			185	
Change	Public debate		37	
		Alternative	58	
		Protest	12	
Inequalities/social exclusion	Emergency Election		6	
				92
	Disabilities		26	
Government activity	Humanity		6	
	Racism		4	
	Young People		4	
			33	
Climate Change	Public Expenditure		15	
				3

Table 3. Themes connected to austerity

*A theme contains a general reference to the austerity topic (such as hashtag or words), while a reference could include different themes.

Conclusion

This work helps to shed light on the main discursive strategies and the dynamics of social media communication and discourses, in terms of anti-austerity practices and the anti-austerity worldview, by focusing on the potential interconnections between the media's agenda and Twitter discourse, as well as by associating and categorizing the concept of austerity in relation to others topics.

Our research has revealed some insights that could be summarized in three main points. Firstly, despite austerity being a topic mainly discussed by left-leaning users, the Labour Party was rarely addressed as one of the parties capable of challenging it. Although this could infer that the Labour Party was not a popular theme in tweets, this observation is particularly thought-provoking. Indeed, despite the fact that the topic of austerity is connected to social inequalities and poverty, as well as representing one of the major concerns of people who were actively involved in discussions about the general election, the link to the Labour Party was almost absent from tweets during the election campaign period. These data are of particular interest given that the Labour Party has historically been associated with campaigning on these issues.

Secondly, while austerity was rarely mentioned by mainstream media accounts on Twitter, this topic was widely tweeted about during the election campaign by non-elite actors. This could be seen as a limitation of agenda setting, since no correlation was found between the agenda set by media accounts on Twitter and the public discussion about it.

However, a link was found to exist between the mainstream media agenda on Twitter and user tweets, which supports the validity of agenda setting. More specifically, it supports the idea of inter-media agenda setting, where the agenda discussed in the Twittersphere is set by traditional offline media. Indeed, there is a correspondence between offline media events (talk shows, news articles and question times) and peaks in tweets discussing or mentioning austerity, showing that the agenda set by offline media influences the public agenda in the Twittersphere.

Finally, while austerity has clear implications for citizens' daily life, in this case, it seemed to be more of an "elitist" topic, which was mainly addressed by those who were already politically oriented and well informed about austerity-related issues. However, this could suggest that this topic is too complex to be managed and discussed in the Twittersphere, or even that it is not perceived as a topic of concern.

Although some limits in using Twitter data exist, such as representativeness (only some segments of the population are present on the platform), the selection of samples (in relation to data extracted by using hashtags, which can group together people with similar characteristics), the analysis of hashtags (which can be used on Twitter to attract attention or omitted when the topic becomes relevant and widely known), the interpretation of retweets (not always possible to be used as a "popularity" measure), the loss of information (related to sub-tweeting activity or screen captures, for example), and the impossibility to verify the validity of Twitter accounts and related information (also in order to understand if an account corresponds to a real user), our research shows how it

is possible to analyse Twitter data sets to explore specific cultural and socio-political conversations (Tufekci, 2014). With all these limitations in mind, in this research, we have tried to focus on the role played by Twitter in influencing both political and media agendas, specifically regarding the austerity topic.

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References

Ahmed, S., and Skoric, M. M. (2014). My name is Khan: The use of Twitter in the campaign for 2013 Pakistan general election. In R. H. Sprague Jr. (Ed.), HICSS 2014: Proceedings of the 47th Hawaii International Conference on System Science (pp. 2242–2251). Washington, DC: IEEE Computer Society.

Bae, J. H., Son, J. E., and Song, M. (2013). Analysis of twitter for 2012 South Korea presidential election by text mining techniques. *Journal of Intelligence and Information Systems*, 19(3): 141–156.

Bode, L., and Dalrymple, K. E. (2014). Politics in 140 characters or less: Campaign communication, network interaction, and political participation on Twitter. *Journal of Political Marketing*, 1–22.

Bode, L., and Vraga, E.K. (2015). In related news, that was wrong: the correction of misinformation through related stories functionality in social media. *Journal of Communication*, 65(4), 619–638.

Bode, L., Vraga, E.K., Borah, P. and Shah, D.V. (2014), A new space for political behavior: political social networking and its democratic consequences. *Journal of Computer-Mediated Communication*, 19(3), 414–429.

Boulianne, S. (2015), Social media use and participation: a meta-analysis of current research. *Information, Communication and Society*, 18(5), 524–538.

Bruns, A., and Burgess, J. (2011). #Ausvotes: How Twitter covered the 2010 Australian federal election. *Communication, Politics and Culture*, 44(2), 37–56.

Bruns, A., and Highfield, T. (2013). Political networks on Twitter: Tweeting the Queensland state election. *Information. Communication and Society*, 16(5), 667–691.

Burgess, J. E., and Bruns, A. (2012). (Not) the Twitter election. *Journalism Practice*, 6(3), 384–402.

Ceron, A., Curini, L., Iacus, S., and Porro, G. (2014). Every tweet counts? How content analysis of social media can improve our knowledge of citizens political preferences with an application to Italy and France. *New Media & Society*, 16(2), 340–358.

Chadwick, A. (2013). *The hybrid media system: Politics and power*. Oxford, UK: Oxford University Press.

Conover, M. D., Ratkiewicz, J., Francisco, M., Goncalves, B., Flammini, A., and Menczer, F. (2011). Political polarizationon Twitter. In N. Nicolov, J. G. Shanahan, L. Adamic, R. Baeza-

Yates, and S. Counts (Eds.), *Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media* (pp. 89–96). Menlo Park, CA: The AAAI Press.

Conway, B. A., Kenski, K., and Wang, D. (2013). Twitter use by presidential primary candidates during the 2012 campaign. *American Behavioral Scientist*, 57(11), 1596–1610.

Conway, B. A., Kenski, K., and Wang, D. (2015). The Rise of Twitter in the Political Campaign: Searching for Intermedia Agenda-Setting Effects in the Presidential Primary. *Journal of Computer-Mediated Communication*, 20(4), 363–380.

D'heer, E., and Verdegem, P. (2014). Conversations about the elections on Twitter: Towards a structural understanding of Twitter's relation with the political and the media field. *European Journal of Communication*, 29(6), 720–734.

Dolezal, M. (2015). Online Campaigning by Austrian Political Candidates: Determinants of Using Personal Websites, Facebook, and Twitter. *Policy and Internet*, 7, 103–119.

Dunn, S. W. (2009). Candidate and media agenda setting in the 2005 Virginia gubernatorial election. *Journal of Communication*, 59, 635–652.

Enli, G. S., and Skogerbo, E. (2013). Personalized campaigns in party-centered politics: Twitter and Facebook as arenas for political communication. *Information, Communication & Society*, 16(5), 757–774.

Evans, H. K., Cordova, V., and Sipole, S. (2014). Twitter style: An analysis of how house candidates used Twitter in their 2012 campaigns. *PS: Political Science and Politics*, 47(2), 454–462.

Gainous, J., and Wagner, K. M. (2014). *Tweeting to power: The social media revolution in American politics*. Oxford, UK: Oxford University Press.

Gainous, J., Wagner, K., and Gray, T.J. (2016). Internet freedom and social media effects: democracy and citizen attitudes in Latin America. *Online Information Review*, 40(5), 712–738.

Gerlitz, C., and Lury, C. (2014). Social media and self-evaluating assemblages: on numbers, orderings and values. *Distinktion: Scandinavian Journal of Social Theory*, 15(2), 174–188.

Golan, G. (2007). Inter-Media Agenda Setting and Global News Coverage. *Journalism Studies*, 7(2), 323–333.

Golbeck, J., Grimes, J. M., and Rogers, A. (2010). Twitter use by the U.S. Congress. *Journal of the American Society for Information Science and Technology*, 61(8), 1612–1621.

Graham, T., Broersma, M., Hazelhoff, K., and van't Haar, G. (2013). Between broadcasting political messages and interacting with voters: The use of Twitter during the 2010 UK general election campaign. *Information, Communication and Society*, 16(5), 692–716.

Graham, T., Jackson, D., and Broersma, M. (2014). New platform, old habits? Candidates' use of Twitter during the 2010 British and Dutch general election campaigns. *New Media & Society*, 18(5) 765–783.

Heatherly, K.A., Lu, Y., and Lee, J.K. (2016). Filtering out the other side? Cross-cutting and like-minded discussions on social networking sites. *New Media and Society*, 1–19.

Hellsten, I., and Vasileiadou, E. (2014). The creation of the climategate hype in blogs and newspapers: mixed methods approach. *Internet Research*, 25(4), 589–609.

Hemphill, L., Otterbacher, J., and Shapiro, M. A. (2013). *What's Congress doing on Twitter?* In A. Bruckman, S. Counts, C. Lampe, and L. Terveen (Eds.), CSCW 2013: Proceedings of the

2013 Conference on Computer Supported Cooperative Work Companion (pp. 877–886). New York, NY: ACM.

Hosch-Dayican, B., Amrit, C., Aarts, K., and Dassen, A. (2016). How do online citizens persuade fellow voters? Using Twitter during the 2012 Dutch parliamentary election campaign. *Social Science Computer Review*, 34(2), 135–152.

Hsu, C., and Park, H. W. (2012). Mapping online social networks of Korean politicians. *Government Information Quarterly*, 29(2), 169–181.

İkiz, O. O., Sobaci, M. Z., Yavuz, N., and Karkin, N. (2014). Political use of Twitter: The case of metropolitan mayor candidates in 2014 local elections in Turkey. In E. Estevez, M. Janssen, and L. Soares Barbosa (Eds.), ICEGOV '14: Proceedings of the 8th International Conference on Theory and Practice of Electronic Governance (pp. 41–50). New York, NY: ACM.

Jaidka, K., and Ahmed, S. (2015). The 2014 Indian general election on Twitter: An analysis of changing political traditions. In A. Chib, M. Kam, and J. Burrell (Eds.), ICTD '15: Proceedings of the Seventh International Conference on Information and Communication Technologies and Development (Number 43). New York, NY: ACM.

Jungherr, A. (2014). The logic of political coverage on Twitter: Temporal dynamics and content. *Journal of Communication*, 64(2), 239–259.

Jungherr, A. (2015). *Analyzing political communication with digital trace data: The role of Twitter messages in social science research*. Heidelberg, Germany: Springer.

Kingdon, J. W. (2003). *Agendas, alternatives, and public policies*. New York: Longman.

Kruikemeier, S. (2014). How political candidates use Twitter and the impact on votes. *Computers in Human Behavior*, 34, 131–139.

Lancendorfer, K. M., and Lee, B. (2010). Who influences whom? The agenda building relationship between political candidates and the media in the 2002 Michigan governor's race. *Journal of Political Marketing*, 9, 186–206.

Larsson, A. O., and Kalsnes, B. (2014). "Of course we are on Facebook": Use and non-use of social media among Swedish and Norwegian politicians. *European Journal of Communication*, 29(6), 653–667.

Larsson, A. O., and Moe, H. (2012). Studying political microblogging: Twitter users in the 2010 Swedish election campaign. *New Media & Society*, 14(5), 729–747.

Lilleker D. G., Koc-Michalska K., Jackson N. (2015). Social media in the UK election campaigns 2008-14: Experimentation, innovation and convergence. In: Bruns A, Skogerbo E (eds) *Routledge Companion to Social Media and Politics*. London: Routledge, pp. 325–337.

McCombs, M., & Lennon, F. (1998). Two levels of agenda setting among advertising and news in the 1995 Spanish elections. *Political Communication*, 15(2), 225–238.

Lin, Y. R., Keegan, B., Margolin, D., and Lazer, D. (2014). Rising tides or rising stars?: Dynamics of shared attention on Twitter during media events. *Plos One*, 9(5): e94093. doi: 10.1371/journal.pone.0094093.

Lineman, M., Do, Y., Kim, J. Y., and Joo, G. J. (2015). Talking about Climate Change and Global Warming. *Plos One*, 10(9): e0138996. doi: 10.1371/journal.pone.0138996.

Macnamara, J. (2011). Pre and post-election 2010 online: What happened to the conversation? *Communication, Politics and Culture*, 44(2), 18–36.

Oelsner, K., and Heimrich, L. (2015). Social Media Use of German Politicians: Towards Dialogic Voter Relations? *German Politics*, 24, 451–468.

Parmelee, J. H., and Bichard, S. L. (2012). Politics and the Twitter revolution: How tweets influence the relationship between political leaders and the public. Plymouth, UK: Lexington Books.

Peterson, R. D. (2012). To tweet or not to tweet: Exploring the determinants of early adoption of Twitter by House members in the 111th Congress. *The Social Science Journal*, 49(4), 430–438.

Plotkowiak, T., and Stanoevska-Slabeva, K. (2013). German politicians and their Twitter networks in the Bundestag election 2009. *First Monday*, 18(5). In <http://firstmonday.org/article/view/3816/3671> (Retrieved 22 March 2017).

Ragnedda, M. (2017). *The third digital divide. A weberian approach to digital inequalities*. London and New York: Routledge.

Ruiu M.L., and Ragnedda, M. (2017) Empowering local communities through collective grassroots actions: The case of “No Al Progetto Eleonora” in the Arborea District (OR, Sardinia), *The Communication Review*, 20(1), 50–67.

Saldana, M., McGregor, S.C., and Gil de Zúñiga, H. (2015). Social media as a public space forpolitics: cross-national comparison of news consumption and participatory behaviors in the United States and the United Kingdom. *International Journal of Communication*, 9, 3304–3326.

Scherman, A., Arriagada, A., and Valenzuela, S. (2015). Student and environmental protests in Chile: the role of social media. *Politics*, 35(2), 151–171.

Skogerbo, E., Larsson, A.O., and Christensen, C. (Eds), *The Routledge Companion to Social Media and Politics*. Routledge, New York, NY.

Small, T. A. (2010). Canadian politics in 140 characters: Party politics in the Twitterverse. *Canadian Parliamentary Review*, 33(3), 39–45.

Smith, M. A., Rainie, L., Himelboim, I., and Shneiderman, B. (2014). “Mapping Twitter topic networks: From polarized crowds to community clusters” Pew Research Center . URL: http://www.pewinternet.org/files/2014/02/PIP_Mapping-Twitter-networks_022014.pdf. (Retrieved 24 November 2016).

Stone, B. (2009). What’s Happening? URL: <https://blog.twitter.com/2009/whats-happening> (Retrieved on 05 February 2017).

Straus, J. R., Glassman, M. E., Shogan, C. J., and Navarro Smelcer, S. (2013). Communicating in 140 characters or less: Congressional adoption of Twitter in the 111th Congress. *PS: Political Science and Politics*, 46(1), 60–66.

Suiter, J. (2015). Political campaigns and social media: A study of #mhe13 in Ireland. *Irish Political Studies*, 30(2), 299–309.

Tufekci, Z. (2014). Big Questions for Social Media Big Data: Representativeness, Validity and Other Methodological Pitfalls. *Proceedings of the 8th International AAAI Conference on Weblogs and Social Media*.

Vaccari, C., Valeriani, A., Barberá, P., Bonneau, R., Jost, J. T., Nagler, J., and Tucker, J. (2015). Political expression and action on social media: Exploring the relationship between lower- and higher-threshold political activities among Twitter users in Italy. *Journal of Computer-Mediated Communication*, 20(2), 221–239.

Valenzuela, S., Somma, N., Scherman, A. and Arriagada, A. (2016). Social media in Latin America: deepening or bridging gaps in protest participation? *Online Information Review*, 40(5), 695–711.

Valenzuela, S. (2013). Unpacking the use of social media for protest behavior: the roles of information, opinion expression, and activism. *American Behavioral Scientist*, 57(7), 920–942.

Vergeer, M., and Hermans, L. (2013). Campaigning on Twitter: Microblogging and online social networking as campaign tools in the 2010 general elections in the Netherlands. *Journal of Computer-Mediated Communication*, 18(4), 399–419.

Vliegenthart, R., and Walgrave, S. (2008). The contingency of intermedia agenda setting: A longitudinal study in Belgium. *Journalism & Mass Communication Quarterly*, 85(4), 860–877.

Vraga, E. (2016). Party differences in political content on social media. *Online Information Review*, 40(5), 595-609.

Wells, C. and Thorson, K. (2015). Combining big data and survey techniques to model effects of political content flows in Facebook. *Social Science Computer Review*, 35(1): 33-52.

Wells, T., and Link, M. (2014). Facebook user research using a probability-based sample and behavioral data. *Journal of Computer-Mediated Communication*, 19(4), 1042-1052.

Williams, C. B., and Girish, J. (2012). Social networks in political campaigns: Facebook and the congressional elections of 2006 and 2008. *New Media and Society*, 15(1): 52-71.