Presence and specificity of the political communication of the Catalan independence leaders on Twitter in the 2017 regional elections

by Javier Bustos Díaz, Francisco Javier Ruiz del Olmo, and Miguel Nazario Moreno Velasco

Abstract
The regional elections in Catalonia held on 21 December 2017 received wide media coverage, far beyond Spanish media, due to separatist tension in that territory and was one of the main topics in most of the world’s media. Within this process social networks, especially Twitter, obtained crucial relevance given the interest aroused by the political leaders’ publications, since in those elections the debate transcended the usual ideological divisions of right and left and became a struggle between constitutionalists and separatists. This paper analyses the presence and influence of the main candidates of the Catalan political parties on Twitter. To achieve this, a mainly quantitative, mixed methodology based on big data was carried out where all the tweets issued by the candidates during the electoral campaign were analysed.

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Introduction

The political situation in Catalonia, Spain, and the various processes that have arisen since the independence boom, is an issue that has crossed Spanish borders. In fact, Perales and Pont (2017) reflected that international media began to devote more attention to the development of the problem in Catalonia from 2012 and that international coverage on this issue has progressively increased. The regional elections of this autonomy were the events mostly represented in international press. In addition, the illegal referendum of 1 October 2017, where the state turned to security forces to guarantee compliance, and its actions were often reported with a good dose of media manipulation, on the front page of many media outlets in Europe and the United States [1].

These events have had a great impact on international media, as well as on social networks, in a media framework that some researchers have defined as news tweeting (Revers, 2014). According to information collected by Cool-Tabs, the week of the 1 October referendum resulted in 11.8 million tweets on the matter, with 5.96 million sent on the day of the referendum itself. According to the same data source, the Catalan electoral period was not as relevant as the 1-0 case, with 716,000 tweets from 5 December to 20 December.

Social and political activism takes various forms in different countries, times, and contexts. In addition, they depend on cultural, economic, and technological factors. Thus, the roles of online mass media and social networks have been
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considered in a broader context. Researchers have carried out studies on different connectivity options and possibilities in a specific framework. To that effect, Papacharissi (2015) stated that all media have always been social, to which must be added their complex relationship with society, given that mass media always occurs within a social context. This creates a reciprocal influence between social media and society and culture. However, virtual social media broaden that historical relationship, as they are online tools that have been specifically designed to promote social interactions (Haro-de-Rosario, et al., 2018).

Carty [2] established that the constituent elements of virtual communities are a combination that also defines the forms of contemporary political actions. They are decentralised, diverse, heterogeneous, fluid, open, informal, and autonomous communities. In societies where the use of the Internet is massive, communicative practices on social networks have been treated as a substitute or competitor to traditional, hierarchically designed social organisations (Margetts, et al., 2015).

This investigation focuses on the analysis of influence of Catalan political leaders on Twitter during the electoral period, from 5 December to 19 December 2017. Ultimately and specifically, the purpose of this work is to examine the impact that each candidate had on the development of the campaign on Twitter and measure that impact.

To achieve these objectives, a methodology based on mass data processing was used. We needed to combine induction with deduction, following Bacon (2000), to advance in knowledge through semi-induction, which is the empirical detection of schemes or patterns constructed by theoretical assumptions. Computational approaches to communication, if they were purely inductive, could lead to problems of internal and external validity (Matei and Kee, 2019).

Thanks to this methodological approach, we have been able to extract the absolute total of the sample (at least those offered by the Twitter API, with the limitations that this entails), all the precise data for analysis, instead of resorting to representative samples.

From the beginning of Procés to the regional elections of 21D

The Parliament of Catalonia approved a referendum on 27 September 2012 to ask the Catalan electorate if it was in favour of “disconnection” from Spain and hence, the independence of Catalonia [3]. However, it was not binding.

This referendum took place on 9 November 2014 and the Yes to independence obtained 80.7 percent support. These results motivated the president of the Generalitat of Catalonia, Artur Mas, to announce that regional elections would be held 27 September 2015 where Convergència and ERC would come under the joint acronym Junts pel Sí. In these elections they obtained 47.8 percent of the vote, granting them an absolute majority of the chamber. On 9 November 2015, taking advantage of this majority, the Parliament approved “the commencement of the process to create the independent Catalan State” [4].

With Carles Puigdemont, president of the Generalitat of Catalonia, events were triggered that lead to the call for elections on 21 December 2017. In the process, and under the Constitutional Court’s warning that any initiative linked to the 9 November referendum would be considered illegal, in March 2017 the Parliament allocated a budget line to implement a new election. On this occasion, it was held on 1 October 2017, even though the Constitutional Court had suspended it.

This led to the application of Article 155 of the Spanish Constitution (Constitución española, 1978) which states (in translation):

“if an autonomous community does not fulfil the obligations that the Constitution or other laws impose on it, or acts in a way that seriously undermines the general interest of Spain, the Government, upon request to the president of the autonomous community and, in the event of not being attended, with the approval by an absolute majority of the Senate, may take the necessary measures to force the latter to enforce said obligations or to protect said general interest. In order to execute the intended measures in the paragraph above, the Government may instruct all authorities of the autonomous communities.”

Among the different measures regarding application of Article 155 applied by the central government, headed by
Mariano Rajoy, a date was established to hold new elections in Catalonia on 21 December 2017. According to Fernández, *et al.* (2018), the call for these elections offered a very complex vision of coalitions and different options in the context of politics. Following this line of thought “one could say that a clear fracture has been generated in Catalan society, the main principles that marked the differences between political parties were left-right, in Catalonia specifically, parties usually have a clear definition of their nationalist position.”

**Twitter and digital politics in the Catalan case**

As described so far, the developments that led to the execution of 21-D were complex and lengthy. By the same token, it has also provoked more debate. At this point, it should be noted that “[t]he 21-D elections were exceptional, considering that it is a country with a high degree of regional self-government; especially since it did not summon its regional government in Catalonia, but its central one” [6]. On this issue, Carrasco, *et al.* (2018) pointed out that Twitter was one of the essential pillars in coverage and transmission of messages and slogans, as well as in the mobilisation and generation of certain opinions.

Albeit, what makes users prefer Twitter over other social networks for the dissemination of political messages? Firstly, this platform is user-friendly compared to alternatives such as Facebook, as Twitter is a public and open network which does not require users to register in order to view tweets and tweeters (Jivkova-Semova, *et al.*, 2017). In addition, it allows politicians with limited resources to participate in political debate (Jungherr, 2016). However, it is important to note that real world or off-line reputation and recognition still plays an important role in the creation of opinion leaders on Twitter (Guo, *et al.*, 2020).

In addition, from 2008 to now, it seems inconceivable that a politician would not participate in debate on social networks (Sixto and Ávila, 2016), which further emphasises the concept of a permanent campaign, coined by Patrick Caddel (Needham, 2005). As Stier, *et al.* (2018) note, social networks have become vital communication channels for parties during election campaigns. Along these lines, Stier, *et al.* explain that while social networks help mobilise and influence campaigns, they also “present electoral candidates with a wider range of strategic options.”

All this leads to the acceptance of a new digital ecosystem where communication is a fundamental pillar. Its characteristics are complexity, ephemerality, and interconnections between users, which entails modifications in understanding social structures and organisations (Baggiolini and Castro, 2016).

In short, Twitter has established itself as one of the main political communication tools of our day, being one of the essential elements in organising electoral campaigns. For this reason, this work focuses exclusively on Twitter and its specific use by different candidates. Today, the personalisation of politics is “an increasingly widespread phenomenon in the field of political communication” (Rodriguez, *et al.*, 2014). This personalisation consists of focusing problems and issues on people, and the parties themselves toward their candidates, making these the protagonists of campaigns.

**Methodology**

Our dataset is built from public access messages published on Twitter, related to the 2011 Spanish presidential election. Using the Twitter API interface, all the messages that included the 20N keyword published in a three-week period were downloaded, including the official election campaign, and voting day. Adopting this methodological approach has allowed us to obtain a complete sample, generating a global vision of the situation. Being aware of the limitations of the Twitter API (Bruns and Liang, 2012), which does not allow to retrieve more than 3,200 tweets retroactively (Twitter, 2020), our research has focused on the tweets generated by candidates themselves. Miquel Iceta has been the political leader who has published the most tweets, with 333 tweets during the period of analysis. Consequently, and for the conformation of the sample of this article, we can affirm that the restrictions related to the social network Twitter did not affect us. So, this tag was chosen because it is an ideologically neutral identifier, used worldwide and by all political parties when referring to this election. In summary we analysed more than 370,000 messages, written by more than 100,000 users. We found that 40 percent of the messages were retweets and more than 25 percent contained at least one reference.

This work is based on a quantitative methodology that uses big data as a methodological tool to provide a clear vision of the impact of Twitter during the Catalan elections of 2017. According to Jenkins, *et al.* (2016) with the use of big data there are few limits in time and space, and what is even more relevant, it does not matter if variables are scarce,
since it allows analysis of a large set of data linked to them. According to Watts (2017), the discovery of scientific issues by computational means should exceed limits imposed by traditional theories.

Computational approaches can be useful when they focus on practical problems and debates, that is, empirical ones where we cannot indiscriminately adopt signal recognition or the inductive method (Borge-Holthoefer, et al., 2016).

Following these arguments, big data is a scientific, as well as popular, expression with which reference is made to an analysis of massive data from social networks. Enthusiastically, one could argue that big data is “an important factor that has contributed to changes not only for information science but for the whole world” [7].

Similarly, while big data creates a challenge for social sciences, as Halavais (2015) points out, this challenge is not new. According to Halavais, big data “is the central challenge of sociology: connecting micro-connections between individuals with the vast social structures that shape us (and are shaped by us) as a society” [8].

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**Data collection**

Data obtained for analysis include the electoral campaign for the elections in the Parliament of Catalonia from 5–19 December 2017, not including 20 December, corresponding to the day of reflection, nor 21 December, voting day (Table 1).

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Profile</th>
<th>Number of tweets in campaign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carles Puigdemont</td>
<td>@KRLS</td>
<td>89</td>
</tr>
<tr>
<td>Oriol Junqueras</td>
<td>@junqueras</td>
<td>249</td>
</tr>
<tr>
<td>Inés Arrimadas</td>
<td>@InesArrimadas</td>
<td>94</td>
</tr>
<tr>
<td>Miquel Iceta</td>
<td>@miqueliceta</td>
<td>333</td>
</tr>
<tr>
<td>Xavier Domènech</td>
<td>@xavierdomenechs</td>
<td>299</td>
</tr>
<tr>
<td>Xavier Garcia Albiol</td>
<td>@Albiol_XG</td>
<td>146</td>
</tr>
<tr>
<td>Carles Riera</td>
<td>@carlesral</td>
<td>60</td>
</tr>
</tbody>
</table>

Tweets from the seven candidates were sought and gathered during the week following the debate. Subsequently, these were converted to RDD objects, saving only data required for publication, filtering them by election campaign dates and, finally, printing them to a desired format (in this case TSV, tab-separated values).

**Data processing and variable definition**

According to Tascón (2013) four defining variables must be considered when undertaking an analysis using massive data: volume, variability, speed, and forms of visualisation. Under this premise, this project has been developed around variables that Twitter allows based on each tweet, that is, retweets and likes.

A computer-based tool was developed for analysis, which essentially consisted of the use of a Linux-based operating
system (Ubuntu 16.04) loaded on a virtual machine through the Oracle VM VirtualBox. The choice of this environment was mainly due to the vast community created around it (unlike other Linux systems). In addition, the large number of media implemented for this operating system, as well as the low configuration difficulty (compared to a Windows system) was also been considered. On the other hand, the possibility of installing programs almost automatically (through Linux apt-get commands) and the installation of libraries for Python (using the pip-install command) also played an essential role in this decision.

Thirdly, in terms of the development and use of tools, Python was chosen, due to both its simplicity and the number of available tools for data analysis. Its popularity in this area has grown exponentially.

Apache Spark and Twitter, using the Tweepy library, were used. Spark treated data as RDD objects, types of multidimensional matrices of data, facilitating the use of transformation functions on it, such as saving only the required data of a tweet, filtering by date, and sorting. Tweepy's library provided a series of tools working with the Twitter API through Python. Finally, once the tweets were stored in TSV format, an interactive visualisation was carried out using the Power BI tool.

Results

The purpose of this study is to examine the influence on Twitter of each of the candidates who attended the elections in the autonomous community of Catalonia in December 2017, as well as their level of participation and respective influence in the virtual sphere. Figure 1 illustrates the seats obtained by each political party in the elections.

![Figure 1: Electoral results in the Parliament of Catalonia 2017 elections.](image)
The party chaired by Inés Arrimadas in Catalonia won a close victory, followed byJuntsXCat whose candidate was Carles Puigdemont, and ERC-CatS represented by Oriol Junqueras, finishing in third place. The initial data show a clear fracture in Catalan society, which is divided almost equally between constitutionalist and independence parties, the latter obtaining a significant majority in seats.

However, based on the methodology, the influence on Twitter was measured in relation to the number of tweets published by each of the candidates and the sum of retweets and likes that each had. That is, the social impact that each candidate had on Twitter, since the retweet and like functions are characteristic of Web 2.0, that is, of user participation.

**Figure 2** shows the influence of each of the candidates, that is, the sum of the retweets and likes that they have obtained for each of their tweets during the election campaign.

![Figure 2: Influence on Twitter based on the sum of retweets and likes for each tweet issued in the campaign.](image)

As shown in Figure 2, the same electoral dynamic is maintained as on the day of the elections. Accordingly, we see how the candidates of the JuntsXCat and ERC-CatS parties had a large impact on Twitter as well as in the polls. Similarly, the role of Inés Arrimadas, the most influential candidate of the constitutionalist parties, was notable. However, her significance was much less than her impact on the polls. This was due to several reasons related to the electoral development itself. On the one hand, Ciudadanos represents non-independent Catalans in Catalonia. Unlike other constitutionalist parties such as PP or PSOE, Ciudadanos clearly defined its political space in Catalonia. Similarly, the different actions of the central government, which at that time was headed by Mariano Rajoy, and the lack of positioning by the PSC on some of the main issues such as the self-government of Generalitat, elevated Ciudadanos as the party for non-independentists. In other words, they managed to ensure the ‘useful vote’, understood as that which is granted to the main political forces to the detriment of smaller ones.
Table 2: Total number of tweets and supporters won in the election campaign. Source: Twitter y Tweetcounter.

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Profile</th>
<th>Number of tweets in campaign</th>
<th>Followers gained in campaign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carles Puigdemont</td>
<td>@KRLS</td>
<td>89</td>
<td>11,560</td>
</tr>
<tr>
<td>Oriol Junqueras</td>
<td>@junqueras</td>
<td>249</td>
<td>8,355</td>
</tr>
<tr>
<td>Inés Arrimadas</td>
<td>@InesArrimadas</td>
<td>94</td>
<td>12,790</td>
</tr>
<tr>
<td>Miquel Iceta</td>
<td>@miqueliceta</td>
<td>333</td>
<td>3,323</td>
</tr>
<tr>
<td>Xavier Domènech</td>
<td>@xavierdomenechs</td>
<td>299</td>
<td>2,338</td>
</tr>
<tr>
<td>Xavier Garca Albiol</td>
<td>@Albiol_XG</td>
<td>146</td>
<td>1,880</td>
</tr>
<tr>
<td>Carles Riera</td>
<td>@carlesral</td>
<td>60</td>
<td>9,206</td>
</tr>
</tbody>
</table>

Finally, another very interesting fact obtained from this analysis is the relationship between the number of tweets published during the campaign and the number of followers gained during it.

At this point, some candidates’ need to exaggeratedly increase their activity on Twitter during the elections becomes evident. However, this does not ensure that they will have an effect which is equal to, or greater than, the rest of the candidates. In fact, according to data obtained, the effect is the opposite: a greater number of tweets generates a lower growth of followers.

This is seen in the profiles of Carles Puigdemont, Inés Arrimadas, and Carles Riera, who are the candidates who issued fewer tweets during the campaign (89, 94, and 60 respectively) and are the ones who obtained the greatest number of followers during the elections (11,560, 12,790, and 9,206 respectively).

Content is king in social networks. The user prefers a smaller amount of information that provides greater added value. Thus, in addition to having a concise argument, one must also know how to transfer it in the correct format, since it is impossible to transfer traditional campaign materials to social networks. This is manifested in the number of followers, and as the data shows, the impact on the number of followers was very different among candidates who tweeted more with respect to those who tweeted less.

Discussion and conclusion

1) Textual structure (micro-Level)

This article was based on the following main hypothesis: to analyse the influence of the main candidates in the Catalan parties on Twitter and show the role of Twitter as an essential and active tool of political communication on Twitter...
during the electoral results. The importance of Twitter as a source of news and information for journalists and the media reflects its growing importance as a generator of political information, particularly for younger audiences (Bustos and Ruiz del Olmo, 2016; Newman, et al., 2016; Nielsen and Schroder, 2014).

To reach reliable conclusions, the methodology was based on big data. We agree with Carrasco, et al. that “Twitter has developed as a tool for persuasion and propaganda in political contexts and crisis situations” [9].

It can be claimed that there is a relationship between the influence conferred by users on Twitter, based on the tools available in this social network: retweets and likes, and the social importance of political communication. It can be said that social networks open the door to a new way of analysing politics. Therefore, it is interesting to continue studying social networks and their possible implications in politics which, far from entering a final phase, seem to be having increasing influences.

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Notes


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