ARTICLE

# Twitter activism in the face of nationalist mobilisation: the case of the 2016 Catalan Diada

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## Abstract

This article examines the use of Twitter during the 2016 Catalan *Diada* (Catalan National Day). We aim at analysing the characteristics of the users that employed certain hashtags. To what extent there are significant differences across users employing different hashtags? Drawing on theories of national identity and polarisation, we look at the content of the tweets sent during the *Diada*. Taking advantage of a massive mobilisation event, we examine how Twitter users clustered around different hashtags, the content they transmitted or in which language they tweeted. The empirical analysis is based on a Twitter corpus of about 60,000 unique users and more than 200,000 tweets, which allows us to analyse their characteristics, the content they sent, and the language in which they did it. Our findings show that users clustered around different hashtags and that language is strongly correlated with the content of the tweet. In addition, content analysis of the messages sent within each of the clusters shows distinguishable political views on the independence debate.

## Keywords

Twitter, Catalonia, nationalism, mobilisation

## Topic

political science, text analysis

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# El activismo por Twitter ante la movilización nacionalista: el caso de la diada catalana de 2016

## Abstract

Este artículo examina el uso de Twitter durante la diada catalana de 2016. Nuestro propósito es analizar las características de los usuarios que emplearon ciertos hashtags. ¿Hasta qué punto existen diferencias significativas entre los usuarios que emplean diferentes hashtags? Basándonos en teorías de identidad nacional y polarización, observamos el contenido de los tweets enviados durante la diada. Aprovechando un evento de movilización masiva, examinamos cómo los usuarios de Twitter se agrupaban alrededor de diferentes hashtags, el contenido que transmitían o en qué idioma escribían. El análisis empírico se basa en un corpus de unos 60.000 usuarios únicos de Twitter y más de 200.000 tweets, lo que nos permite analizar sus características, el contenido que enviaron y el lenguaje en el que lo hicieron. Nuestras conclusiones muestran que los usuarios se agruparon alrededor de diferentes hashtags y que el lenguaje moldeó en gran medida el contenido de los tweets. Además, el análisis del contenido de los mensajes enviados dentro de cada uno de los grupos muestra opiniones políticas diferenciadas sobre el debate acerca de la independencia.

## 1. Introduction

The extensive use of social media for protest purposes or social mobilisation has become a distinctive feature of political events across the globe. The Arab Spring in 2011 as well as the 2008 Obama campaign fueled interest in how social media affects citizens' participation in civic and political life. Yet, studies of Twitter communication during mobilisation processes have especially focused on protests in autocratic regimes or in places where the electoral politics can be generally structured into a single left-right dimension. Less is known about how Twitter users communicate and interact in contexts where the political competition is bi-dimensional, that is, in places where social and political competition is structured along the traditional ideological cleavage as well as an additional (quasi-)orthogonal cleavage.

This article aims at contributing to this literature by studying three interrelated aspects: First, we analyse the strategic use of the hashtags and whether they constitute a sign of political polarisation. Second, we examine the characteristics of the users that employ certain hashtags. Finally, we delve into how Twitter users communicate and interact during a period of intense mobilisation.

We focus on the case of Catalonia and, particularly, on the use of Twitter during the days surrounding the Catalan National Day celebrated on 11 September 2016. During this period, Catalan civic associations organised pro-independence demonstrations in different Catalan cities with the goal of pushing forward the secessionist agenda. One of the communication strategies they pursued was to promote the use of certain hashtags. Taking this context into account, how did users communicate and interact between each other? Were the characteristics of the users that employed the same hashtag homogeneous? Were pro-independence mobilisation hashtags able to encapsulate similar profiles? How frequent was the interaction across ideological lines? Was there a conditioning factor that shaped the online communication?

Overall, the goal of this article is twofold: First, we complement previous studies on the use of Twitter hashtags under polarised scenarios. In our case, however, polarisation does not only occur along the traditional left-

right divide, but especially along the national dimension (Catalan-Spanish). In this sense, this article aims at contributing to previous investigations on the publics of the hashtag, a powerful tool shaping online communication (Bruns et al., 2015). If hashtags are successful in clustering similar profiles around them, we expect certain hashtags to have more homogeneous users in what concerns the sovereignty debate than others. Second, we examine how the online debate unfolds under a nationalist mobilisation scenario and describe the interaction and the type of communication that take place between the different groups.

Our methodological approach relies on the communications that took place on Twitter in 6-17 September. We collected 224,900 tweets that employed certain political hashtags. Overall, we have information on around 60,000 unique users. We later analysed whether different hashtags were able to cluster similar users together regarding content and interaction.

Findings of this article are several: First, the analysis shows that the strategic use of hashtags was largely successful and that users with similar views in the sovereignty debate clustered around the same hashtags. While the hashtag #apunt encapsulated both political messages in favour of Catalan independence and messages to bring citizens to the streets, the hashtag #diada was mainly employed to write messages about ceremonial activities or other greeting statements, but also to discredit citizen's mobilisation or to criticise the pro-independence messages launched by the organisers. In other words, the polarisation of the independence debate also manifested itself in social media via the use of hashtags. Second, despite the opposite being true, users that wanted to send different political messages strategically employed different hashtags to do it. Finally, we show that the use of a hashtag strongly correlates with the language employed to send the tweet.

The article proceeds as follows: Next section develops the theoretical framework and the debate around communication in Twitter. This section serves as a backdrop to explain, in section 3, the case of study and the data we employ. Section 4 focuses on mobilisation patterns and on the tweet's content. Finally, section 5 concludes and discusses further avenues of research.

## 2. Theoretical framework

Social media can potentially change or contribute to the political communication, mobilisation, and organisation of social movements (Boulianne 2015). Twitter provides a space to share information alternative to that available in mainstream media coverage (Vicari, 2013) and emerges as a powerful opinion and emotion net organiser (Ferré-Pavia and Perales García, 2015). Furthermore, Twitter was soon considered as an effective tool to improve our current democratic systems by increasing political participation and reducing the participation gap. Indeed, Twitter appears to have a positive effect in mobilising citizens likely to be disengaged with the political process, such as those with lower socioeconomic status and younger individuals (Enjolras et al., 2013). Although Twitter users are not representative of the general population, recent research suggests that there is a strong correlation between online and offline political communication and that online users allow the contents that circulate on the web to diffuse among populations that are much broader than those that engage with social media (Vaccari et al., 2013). Twitter is ultimately believed to be an efficient tool of communication between agents of mobilisation and citizens (Hosch-Dayican et al., 2016)

Despite the potential benefits of Twitter, several authors have warned that deliberation in Twitter does not reach its full potential as users tend to be encapsulated in "echo chambers" of like-minded individuals. By following users or hashtags that align with one's political or ideological views, Twitter users might be alienated from different political views. For example, Gruzd and Roy (2014) show that Twitter further embed partisan loyalties, contributing to political polarisation, a dynamic that is especially strong during electoral periods. Similarly, Barberá (2015) found that online behaviour during the 2012 US presidential election campaign followed ideological lines and users ended up discussing with like-minded individuals. Du and Gegory (2017) concluded that Twitter communities are indeed becoming more polarised as time passes, with existing edges more likely to be removed if they are between communities than inside existing communities. Finally, Conover et al. (2011) have shown that the network of political retweets exhibits a highly segregated partisan structure, with extremely limited connectivity between left- and right-leaning users. All in all, this constitutes a relevant debate, as the academic literature still debates whether Twitter triggers polarisation or helps

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finding common ground between different ideological sides. As it is shown in the previous summary, the debate is far from settled. Whether Twitter resembles an "echo chamber" (selective exposure and ideological segregation) or a "national conversation" (assuming this is not segregated), depends upon several factors. For example, Barberá et al. (2015) show that there is an important asymmetry with respect to political communication with liberals, who are more likely than conservatives to engage in cross-ideological dissemination. In the same work, authors conclude that "previous work may have overestimated the degree of ideological segregation in social-media usage" (Barberá et al., 2015). On a similar vein, previous results show that, with Twitter, people are exposed to broader viewpoints than they were before but are limited in their ability to engage in meaningful discussion (Yardi and Boyd, 2010). Finally, in the context of Catalonia, which we also analyse here, Balcells and Padró-Solanet (2016) found that communication across political lines is relatively frequent and that heterogeneous conversations tend to be significantly longer than homogeneous ones.

The previous debate intertwines with how agents of political mobilisation employ Twitter for political activism, that is, to propagate their own political views and messages. In this sense, the use of hashtags has emerged as one of the most popular tools. Hashtags may be used for a wide range of purposes, such as to coordinate public discussion and information-sharing on political topics. As Bruns and Burgess put it, "using a thematic hashtag in one's tweet as an explicit attempt to address an imagined community of users who are following and discussing a specific topic" (Bruns and Burgess, 2011, p. 4). Hashtags are used to bundle together tweets and political organisations actively employ them for political agitation. Even in some occasions promoting the use of certain hashtags to the list of most employed hashtags becomes a political goal in itself. The question, however, is whether the hashtag community is heterogeneous or homogeneous, that is, whether the strategic use of hashtags is able to reach different audiences or it simply clusters users with similar profiles. Do hashtags quickly reach consensus or different hashtags emerged with different competing publics? The answer to this question is not clear yet. Hitherto, the best evidence comes from Bruns and Burgess (2015) recent article. They show that sometimes hashtags emerge from within the Twitter community and others from certain actors that promote their use. Knowing the answer to this debate is important,

as the use of hashtags might be crucial for understanding the increase (or decrease) in the level of polarisation in the Twitter community.

All in all, the jury is still out on whether hashtags are able to encapsulate similar users or, more generally, whether Twitter bolsters conversations within ideological lines or across them. In this article, we seek to contribute to this debate by analysing Twitter user's interactions and content during a Catalan nationalist mobilisation event. Did ideologically similar users cluster around the same hashtag? More specifically, did users in favour and against independence interact between each other in the face of and during a pro-independence demonstration? If it occurred, in what terms the interaction took place?

# 3. Case of study and data

The Catalan case can offer useful insights in this debate as political competition is divided along two different dimensions: the traditional ideological dimension and the nationalist dimension (Guinjoan, Rodon and Sanjaume, 2013). Over the last years, the secessionist debate has become prominent in the public sphere, redefining the political landscape and the pre-existing political cleavages (Orriols and Rodon, 2016). Although we have some insights on how the different groups interact between each other (Serrano, 2013; Rodon, 2015), we still do not have a clear understanding of how this interaction takes place, especially in online communication forums.

The Catalan National Day (*Diada*) is celebrated every 11 September. This day commemorates the defeat in 1714 against the Bourbon King Philip V of Spain. The surrender marked the dissolution of autonomous Catalan institutions, the removal of Catalan as an official language, and the imposition of new laws from the newly centralised Spain. The Catalan National Day is used by many Catalans to remember that, against many odds, the Catalan identity, culture and language has been able to survive over time. Since 2012, when the debate over independence came to the fore (Cuadras-Morató, 2016), the *Diada* has been a magnet for supporters of Catalan independence. Over the last years, the Catalan National Day has been employed by civic organisations to organise massive demonstrations and push forward the secessionist agenda (Cuadras-Morató, 2016). In 2016's *Diada*, the context we analyse here, this was not an

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exception. The Catalan National Assembly (*ANC*, in Catalan), a civic association that promotes Catalan independence and promotes citizen's mobilisation to pursue this goal, organised a demonstration in the streets of Barcelona and in four other Catalan cities again. According to various sources, around 1 million people took the streets and demanded a new State for Catalonia and the right to celebrate a referendum on independence. Thus, at least in the last few years, the *Diada* has become a context of nationalist mobilisation in which social media plays a prominent role.

Using the Twitter API,[1] we collected all tweets sent between September 6-17 that contained at least one of the following hashtags: #diada, #diada11s2016, #11s2016, #apunt, #apunt11s, #estempreparats, #11stv3, #diadarac1. Although other users could tweet using other hashtags, these hashtags represent a comprehensive account of hashtags employed during this period. They all became the most-employed hashtags in Spain that day. It is also noteworthy to mention that pro-unity online activists did not promote any significant hashtag that day. The first three hashtags are generic, employed every year with subtle differences, and attempted at referring to the National Day. The hashtags #apunt, #apunt11s and #estempreparats were employed by the ANC to mobilise supporters for independence and bring citizens to the streets.[2] Finally, the last two hashtags were used by the Catalan public TV and the most listened radio station, respectively. In total, we collected 224,900 tweets. It is noteworthy to stress that the ANC was behind the design and the initial promotion of the #apunt hashtag. The ANC actively encouraged Twitter users to employ it to propagate its political messages. In addition, the ANC sought to turn the hashtag into a world trending topic. Therefore, if hashtags are successful in clustering similar profiles around them, we should expect the #apunt hashtag to have more homogeneous users in what concerns the sovereignty debate than other hashtags.

Among all collected tweets, there are a few users that provide information about their geolocation (less than 0.5 %). However, most of those that facilitated geographic information were tweeting from Catalonia.

Table 1 displays the distribution of tweets by hashtag and the number of unique users that sent them. Almost half of the tweets contained the hashtag #diada. It was also the most popular hashtag in terms of unique users. However, as the table shows, there was substantial variation in terms of the hashtags users employed. Later, we will ultimately exploit this variation and analyse the language people employed and whether users clustered their content around a hashtag.[3]

Table 1: Summary of the tweets collected by hashtag and number of unique users

| Hashtag | Number of tweets | Number of users |
|---------|------------------|-----------------|
| #diada | 109,667 | 46,726 |
| #apunt | 73,308 | 17,806 |
| #11s2016 | 27,171 | 11,854 |
| #11sTV3 | 16,878 | 8934 |
| #apunt11s | 26,386 | 10,047 |
| #diada11s2016 | 1017 | 873 |
| #diadarac1 | 2175 | 1192 |
| Total | 224,900 | 60,659 |

Figure 1 shows the frequency polygons for the tweets collected under the hashtags #apunt and #diada. The figure shows most of the tweets under the hashtag #diada were sent on 11 September, the Catalan National Day. This trend is consistent with the fact that most of the users may decide to include the hashtag #diada during the National Day, and not before or after. A similar pattern emerges for the hashtag #apunt, promoted by the demonstration organisers to mobilise supporters for independence. The label "a punt", which encapsulated the different political protests around the Catalan territory, was launched a few days before 11 September and several Twitter users started employing it before the demonstrations officially took place. As compared to the hashtag #diada, the use of the #apunt hashtag rapidly declines after the mobilisation event.

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1. We employed the R library "twitteR" (Gentry, 2015).
2. In Catalan, "a punt" and "estem preparats" mean "we are ready". With this slogan, the organisers of the demonstration wanted to send the message that the Catalan society was "ready" for independence.
3. The total sum does not equal the distribution as some users tend to employ more than one hashtag and the same tweet can include more than one hashtag. In addition, we are not taking into account the hashtag "estempreparats", as only 13 users employed it.

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**Figure 1:** Frequency polygons for the tweets with hashtags #apunt and #diada
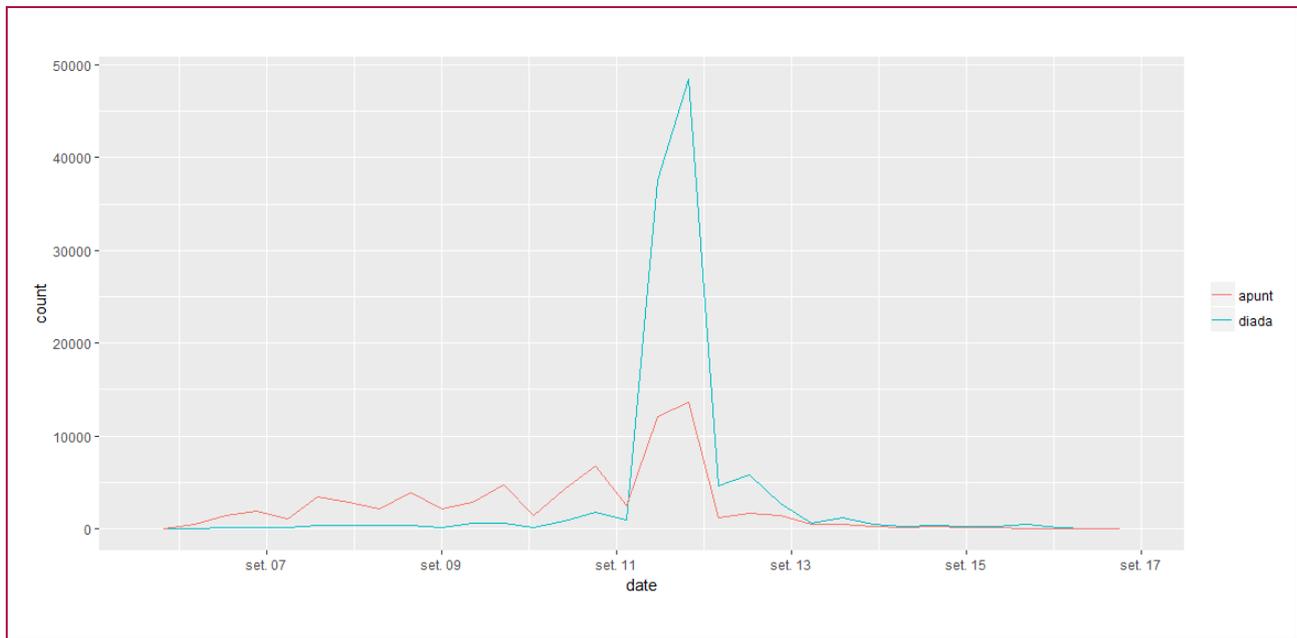


Numbers show that 79 % of tweets #diada were issued on 11 September, while only 37 % of tweets with the hashtag #apunt were sent the same day.

Next, we zoom in on the use of the two most popular hashtags during the Catalan National Day. As Figure 2 illustrates, the hashtag #diada was the most employed hashtag throughout the day. It reached its peak at 6 pm, at the time of the demonstrations. A similar pattern is observed for the hashtag #apunt, although the absolute number of tweets that employed it was significantly lower.

**Figure 2:** Frequency polygons for the tweets with hashtags #apunt and #diada on 11 September

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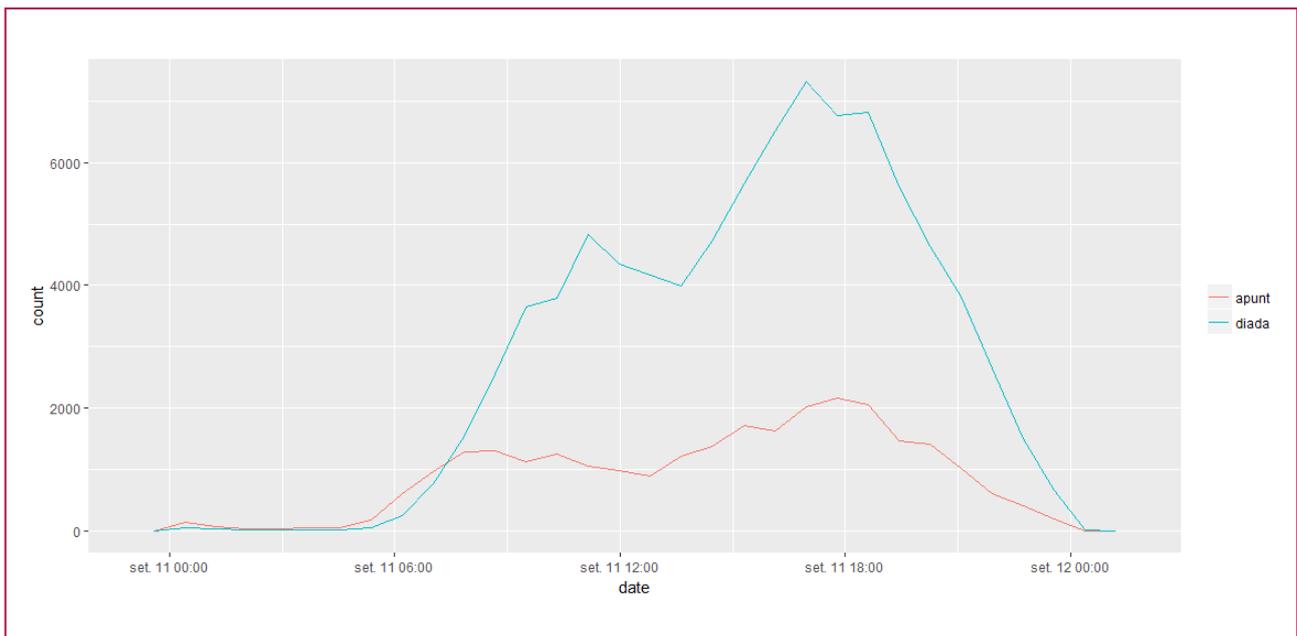
**Figure 3:** Proportion of tweets with hashtags #apunt or #diada (area chart)
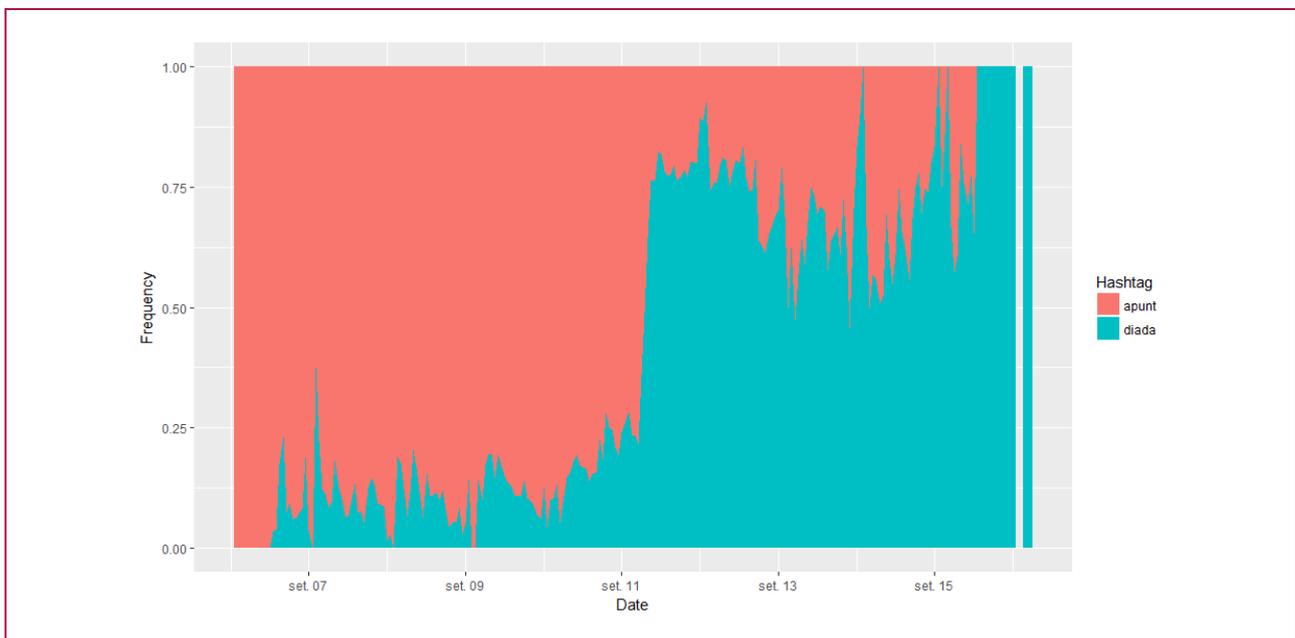


Although the total number of tweets that employed the hashtag #diada was higher, the frequency in which this hashtag was employed as compared to the #diada hashtag portrays a different picture. During the *Diada* and the next two days, almost half of the tweets that were sent included either the hashtag #apunt or #diada. Did users of these hashtags employ different political messages? What was the content of the tweets encapsulated within each of the hashtags? These questions are precisely the ones we will try to answer in the next section.

## 4. Mobilisation and Twitter content

This section first examines whether the use of hashtags was exclusive or complimentary and the language employed to send the tweet. This provides relevant evidence that serves as a backdrop to analyse the language in which the tweet was written. After showing that tweets in different languages clustered around different hashtags, we analyse the content of the tweets and the political messages they were trying to convey.

Figure 4 shows the cross-tabulation between the different hashtags. As illustrated by the percentages, there was little

overlapping between the different hashtags. The highest overlapping occurred between the hashtag #apunt and #11s2016: 36 % of the tweets sent with the hashtag #apunt

**Figure 4:** The use of the different hashtags (in column %)

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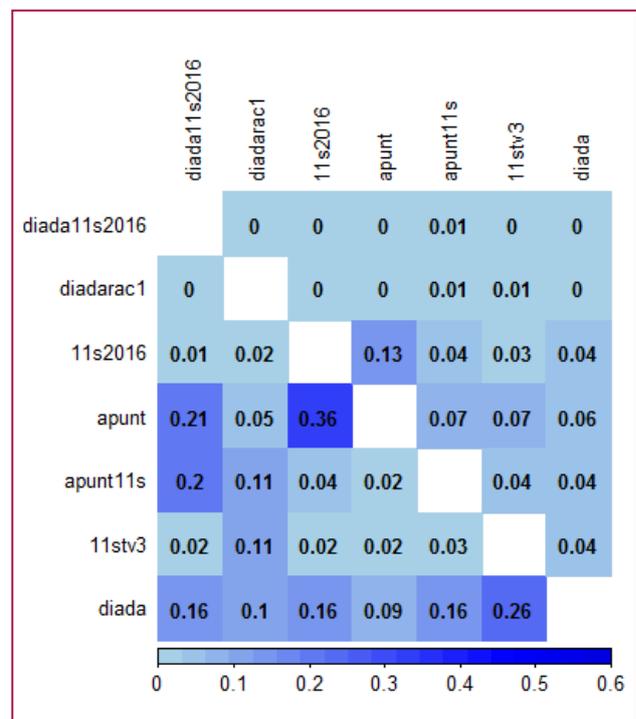
also contained the hashtag #11s2016. Interestingly, the two most employed hashtags during the period of analysis covered by the data−#apunt and #diada−had very low overlapping percentages. Thus, only 6 % of the users employing the hashtag #apunt also employed the hashtag #diada in the same tweet. In fact, 78.3 % of the users that employed the hashtag #diada never employed the hashtag #apunt in the same tweet. On the other hand, 43 % of the users that employed the hashtag #apunt never employed the hashtag #diada.

The next Figure further explores the use of the two most employed hashtags (#diada and #apunt). Figure 5 shows the percentage of tweets sent by users that only employed one or the other hashtag. In the middle of the graph, we plotted the frequency distribution of users that employed the two hashtags, either in the same tweet or in different tweets. Overall, a substantial number of users, around 10,000, employed both of them.

The Figure shows the cumulative distribution of hashtag use by users who used either the hashtag #apunt or the hashtag #diada. Among the 54,000 users who used any of them, only 10,159 users used both, which shows a low level of possible dialogue between users of both hashtags.

However, this behaviour is different in both hashtags. As a matter of fact, 57 % of users who used the hashtag #apunt, also used the hashtag #diada. On the other hand, only 22 % of users who used the hashtag #diada also used the hashtag #apunt.

This pattern provides a first indication that many Twitter users clustered around different hashtags, but others employed both. As we shall see, even users that employed the same hashtag, but in different tweets, used them to send different political messages.

Figure 6 shows the language settings of users grouped around the two most popular hashtags. As the Figure shows, users employing the hashtag #apunt had Twitter configured mainly in Catalan (about 75 % of them). The opposite stands for the hashtag #diada. The language configuration of most users tweeting with this hashtag was Spanish.[4]

This clustering around different hashtags is confirmed when we look at the language people employed to write the tweet. To that effect, we used the library "textcat" to identify the language of the tweet (Hornik, 2013) and analysed whether users employing different hashtags also used different languages to tweet.

**Figure 5:** Hashtag overlapping between the two main hashtags



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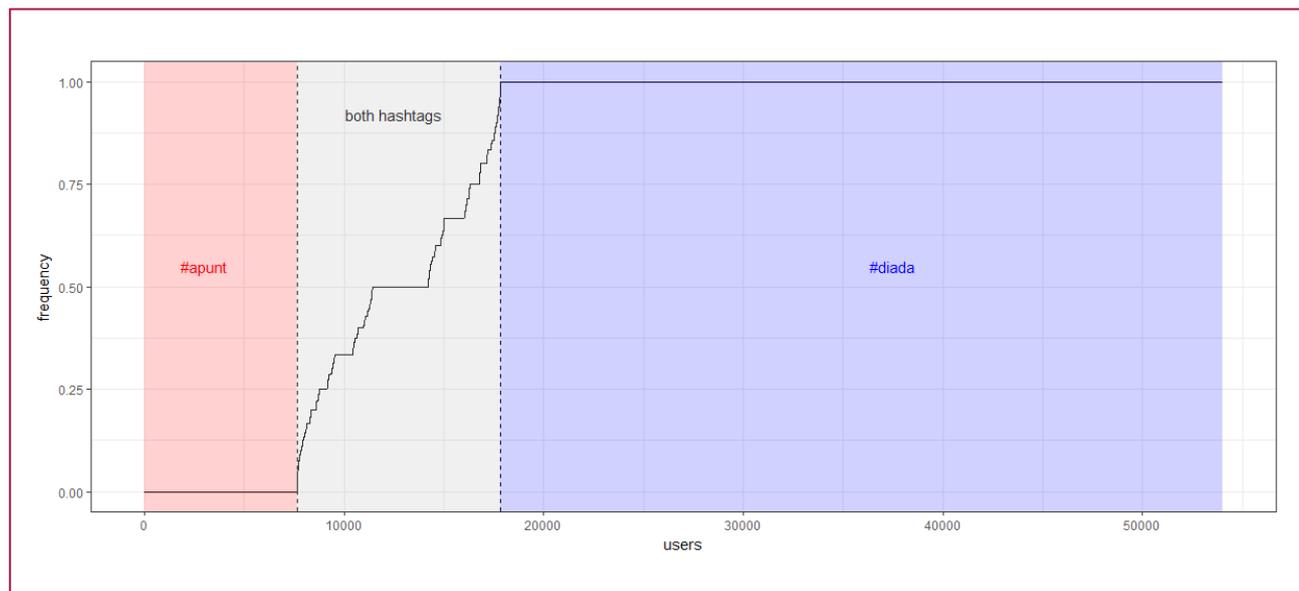
4. It is important to consider that users could start configuring their Twitter in Spanish in 2009 and in Catalan in 2012.

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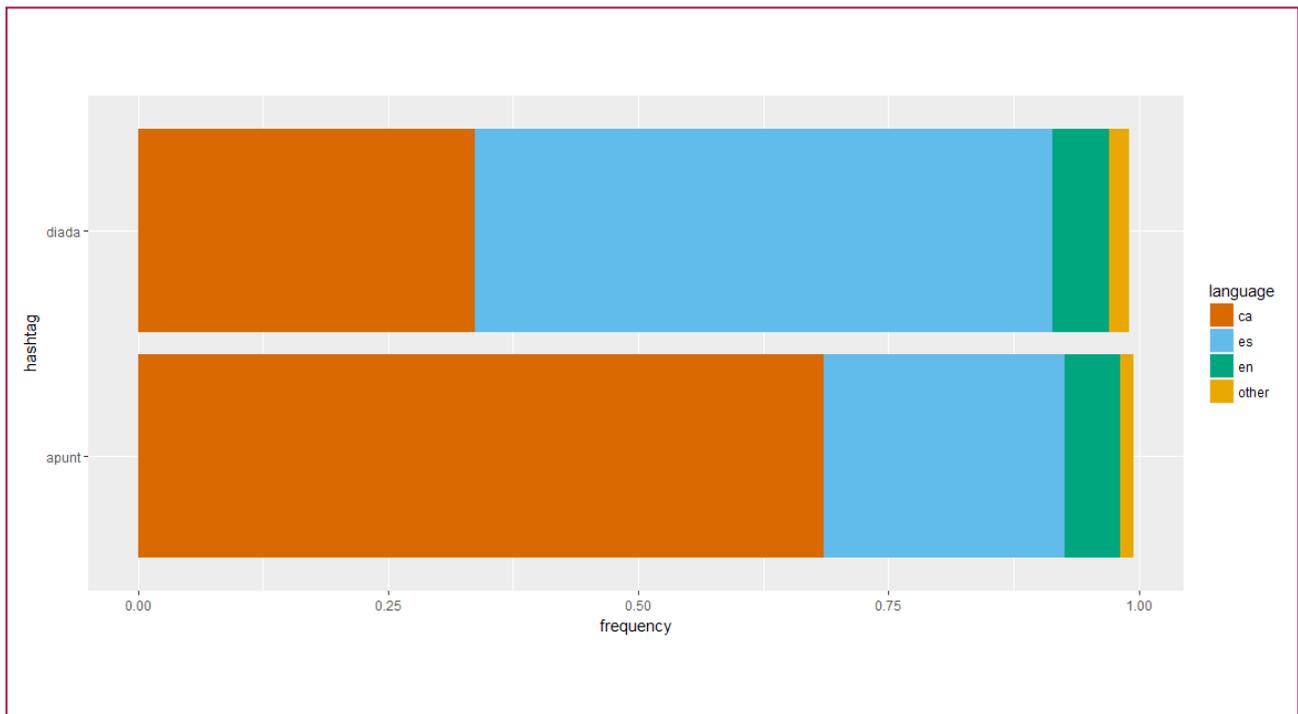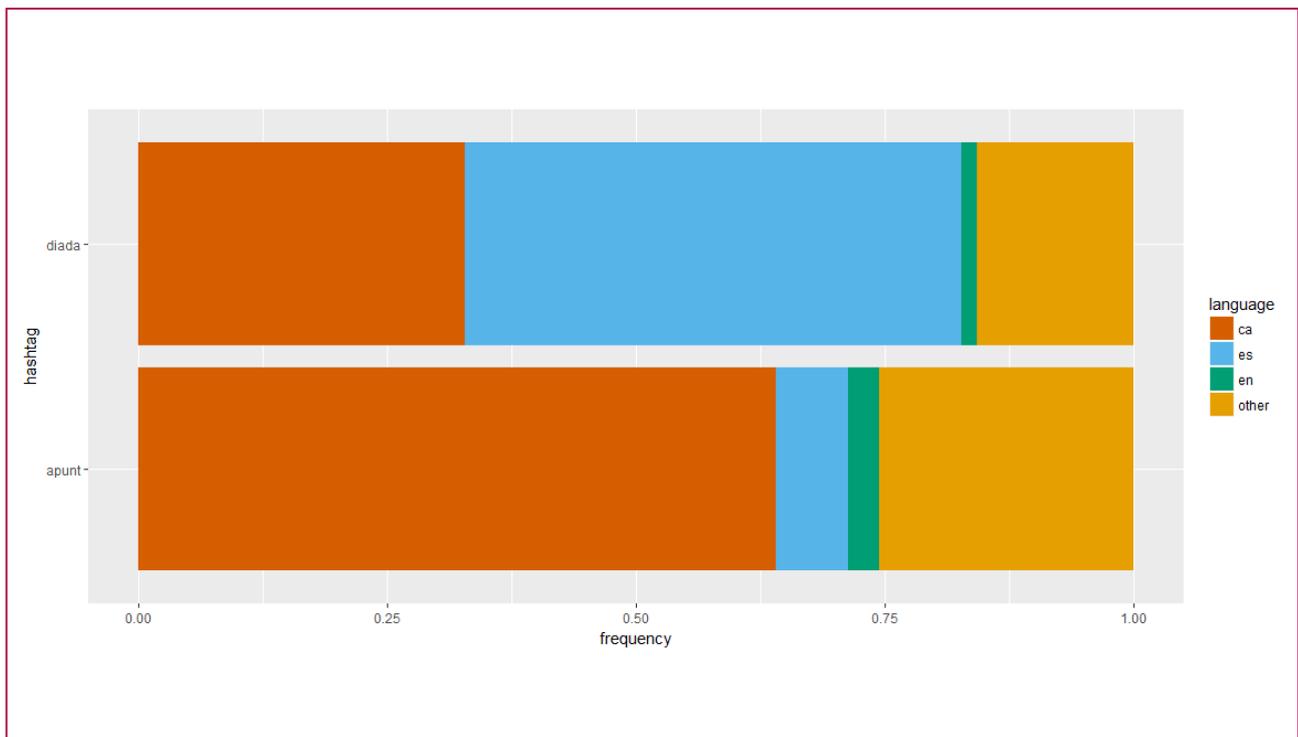**Figure 6:** Users' Language settings by the hashtags #diada and #apunt



**Figure 7:** Language of the tweet by hashtag

This intuition is confirmed in Figure 7. Users employing the hashtag #apunt mostly wrote in Catalan: around 70 % of the tweets under this hashtag were written in this language. In contrast, most of the tweets using the hashtag #diada were written in Spanish.

All in all, we have convincing evidence that users clustered around different hashtags and that language is strongly correlated with the use of the hashtags.

Next, we analyse the content of the tweets sent by hashtag and language. Figure 8 shows the frequency of the most common terms by hashtag and the language in which the tweet was written. To do this, we first removed the stop-words, that is, punctuation signs and spaces. Moreover, we did not consider retweets, and tweets with the same content are only considered once. Therefore, we are only analysing unique messages included in the tweets.

Figure 8 shows the most common bigrams[5] written in Catalan clustered around the two most employed hashtags. Twitter users that wrote in Catalan encapsulated different messages in different hashtags. In the hashtag #apunt, besides generic messages around the National Day, users mostly twitted about the "Catalan Republic" and other political messages. In contrast, the hashtag #diada was mostly employed to write messages about ceremonial activities or other greeting statements.

If we look at the same content for users that tweet in Spanish, the pattern is different. A substantial amount of users employing the hashtag #apunt talk about the "Catalan Republic". However, there are remarkable differences when we look at the hashtag #diada. A great amount of users employed the concept "right to decide" ("derecho a decidir"), which vaguely refers to the demand to hold a referendum on independence. At the same time, other users

**Figure 8:** Bigrams by hashtag sent in Catalan
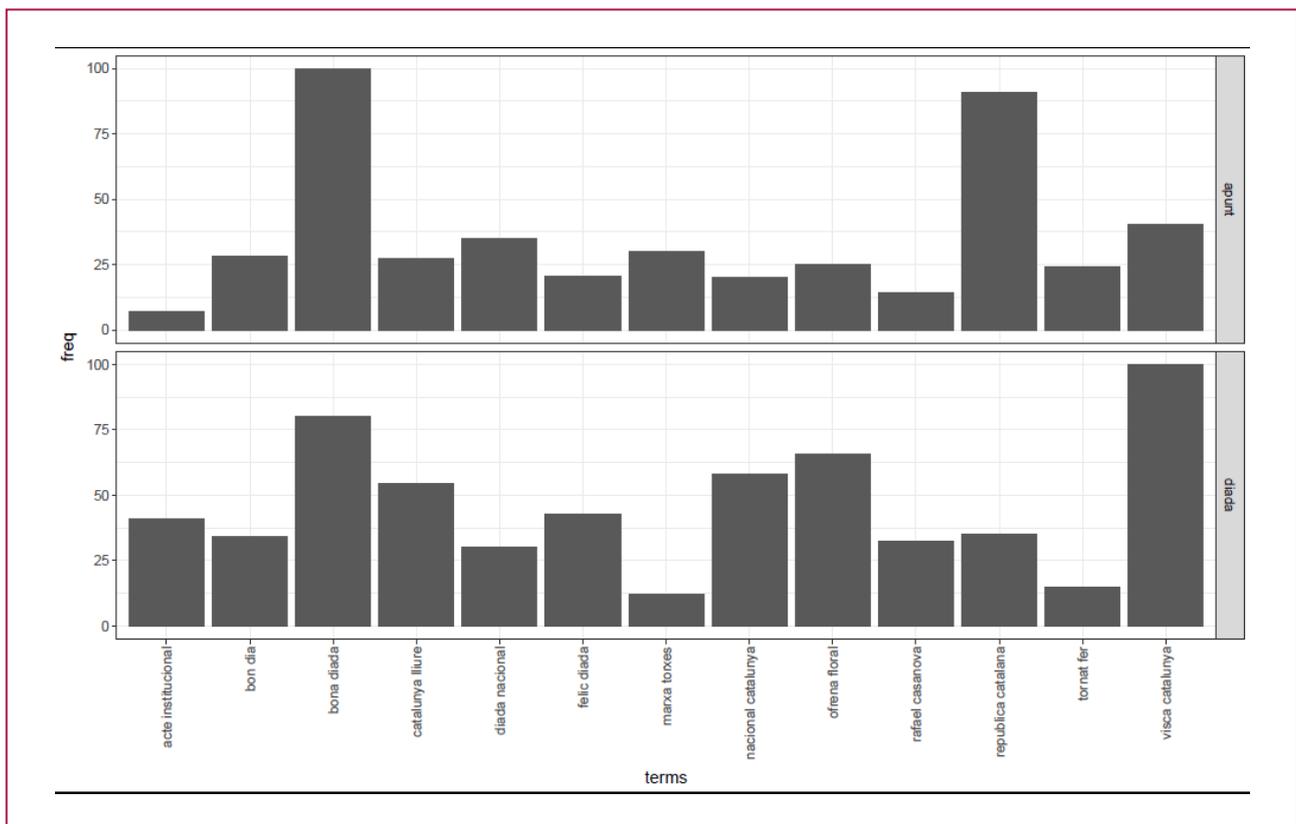


5. A bigram is a sequence of two adjacent elements from a string of tokens.

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**Figure 9:** Bigrams by hashtag sent in Spanish



## 5. Conclusions and discussion
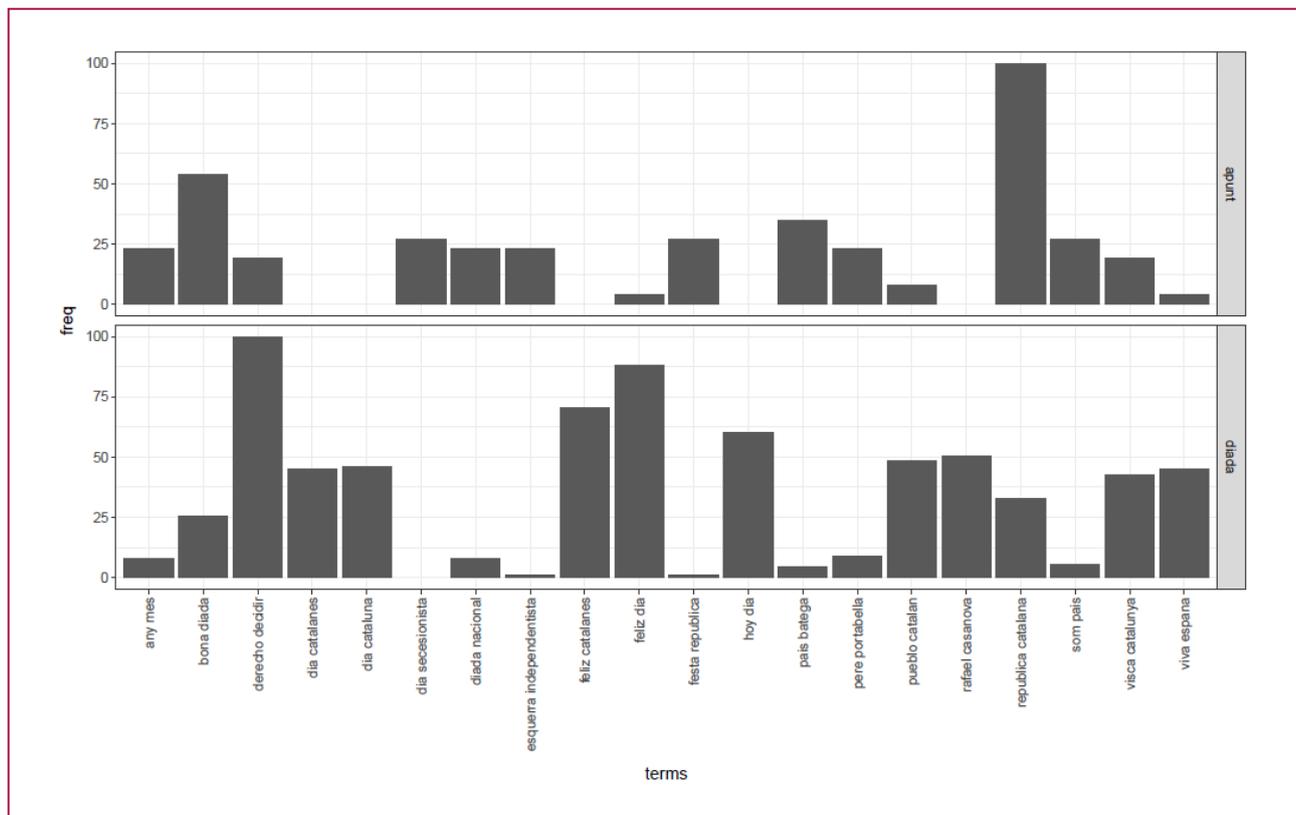
also employed the hashtag to send a "viva espana" message, which aims at triggering a confrontational message against the political mobilisation surrounding the celebration of the Catalan National Day.

A substantial number of citizens use Twitter every day. Either to propagate certain messages or to gather information, Twitter has become an important tool in modern societies. Thanks to its capacity to spread messages, it has also emerged as an essential political tool. Nowadays there is hardly any political event that is not discussed on Twitter. Political agents of mobilisation intensively use Twitter, especially hashtags, to promote their political messages.

The academic literature has analysed whether users with different opinions, attitudes or ideological profiles are exposed to opposing messages or whether they communicate

between each other. Is Twitter an 'echo chamber' in which ideological groups isolate from conflicting opinions or it resembles a heterogeneous forum where different voices and opinions are heard?

In this article, we contribute to this debate by analysing how the promotion of public hashtags shaped Twitter communications right before, during, and right after the Catalan National Day. On 11 September 2016, different Catalan associations organised pro-independence demonstrations throughout Catalonia and Twitter was decisively employed to bring citizens to the streets. During this period, we collected 224,900 tweets and analysed both their content and interaction.

Findings show that users clustered together around different hashtags, which ended up encapsulating different political messages. While the hashtag #apunt was used to send mobilisation messages and pro-independence slogans, the hashtag #diada encapsulated more neutral messages and even messages against independence.

We think these findings encourage researchers to further analyse Twitter communications that take place during protest activities in liberal democracies. In this article, we dug into online communication between users with a different national identification and found that, while exchange of ideas take place, most users tend to employ Twitter to send one-directional messages without engaging in conversations, especially with those using other hashtags, that is, on the opposite side of the political spectrum. Future studies will need to confirm this trend in other settings and cases.

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Twitter activism in the face of nationalist mobilisation…

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