

The Catalan Referendum Seen from Europe: A Twitter Study

On October 1, 2017, the citizens of **Catalonia** voted for their region's independence from **Spain**. The weeks leading up to the vote saw the tension escalating, with the streets in Catalonia occupied by both pro-unity and pro-independence rallies, Catalan government officials arrested and ballot papers were seized by the **Spanish government**. The day of the vote was marked by **violent clashes** with hundreds of casualties occurring as police attempted to prevent the vote from taking place. According to the Catalan government, the **43 percent** voter turnout resulted in a **92 percent "yes"** vote in favour of Catalonia's independence.

While Spain's central government declared the independence vote illegal, the outcome of the disputed referendum gave separatists a mandate to split from **Madrid**. In response, the Spanish government put the region under direct central rule, dismissing Catalonia's president, Carles Puigdemont, and Cabinet, dissolving the Catalan Parliament, and calling for a new election in **December 2017**.

#CatalanReferendum on Twitter

The acute **tensions between regional and national authorities** and the violent episodes between the national police and the voters led the Catalan leaders to call for the **European Union (EU)** to take a stand against the Spanish government in defense of the Catalan people. While denouncing the violence and calling the parties to resume dialogue, the EU institutions declared the referendum result illegal, and made clear that they would not recognize an independent Catalonia. A **wide [debate](#)** developed involving EU politicians, national leaders, and public opinion across Europe, regarding not only the internal situation of Spain, but also **about the position that the EU should take in this affair**.

As is often the case, such a widespread public debate went beyond its institutional and traditional media dimensions and **reverberated widely on Twitter**. To better grasp the scope of the online public discussion, we show in the map below (Figure 1) how a single tweet spread across countries. Among the most shared content by Twitter users was a video showing Spanish policemen beating Catalan firefighters after they formed a human shield to protect Catalan voters. The following tweet was originally posted by the account **@CatalansForYes** and its content has been **retweeted or quoted 50,211 times by users from all 28 European countries**.

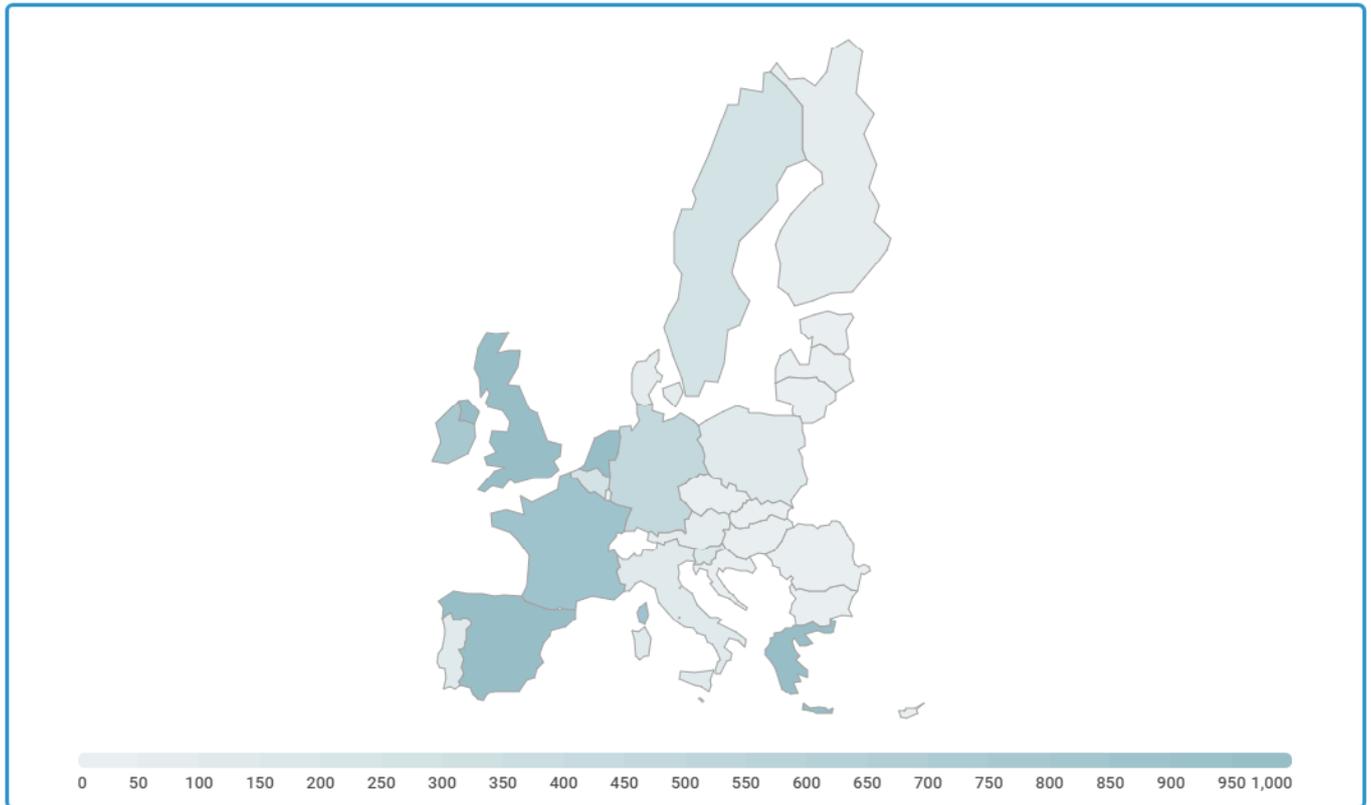


Figure 1: Country distribution of the most frequently shared media content

#Catalanreferendum in Europe

We looked at Twitter data to better understand how the online debate about the Catalan referendum developed across European countries outside of Spain in the first few weeks after the referendum. From **24 September 2017 to 22 October 2017**, we tracked discussions on the Catalan referendum on Twitter, collecting all tweets which featured words or hashtags related to this event (e.g., **Catalunya**, **#CatalanReferendum**, **#1Oct**, etc.); there was a total sample of **7,396,052 tweets**.

We first looked at the **distribution of tweets in English among EU countries, and compared them with the distribution of a sample of random Twitter conversations** collected in comparable conditions. The stacked bar chart below shows how differently national Twitterspheres behaved when it came to discussing the events in Catalonia.

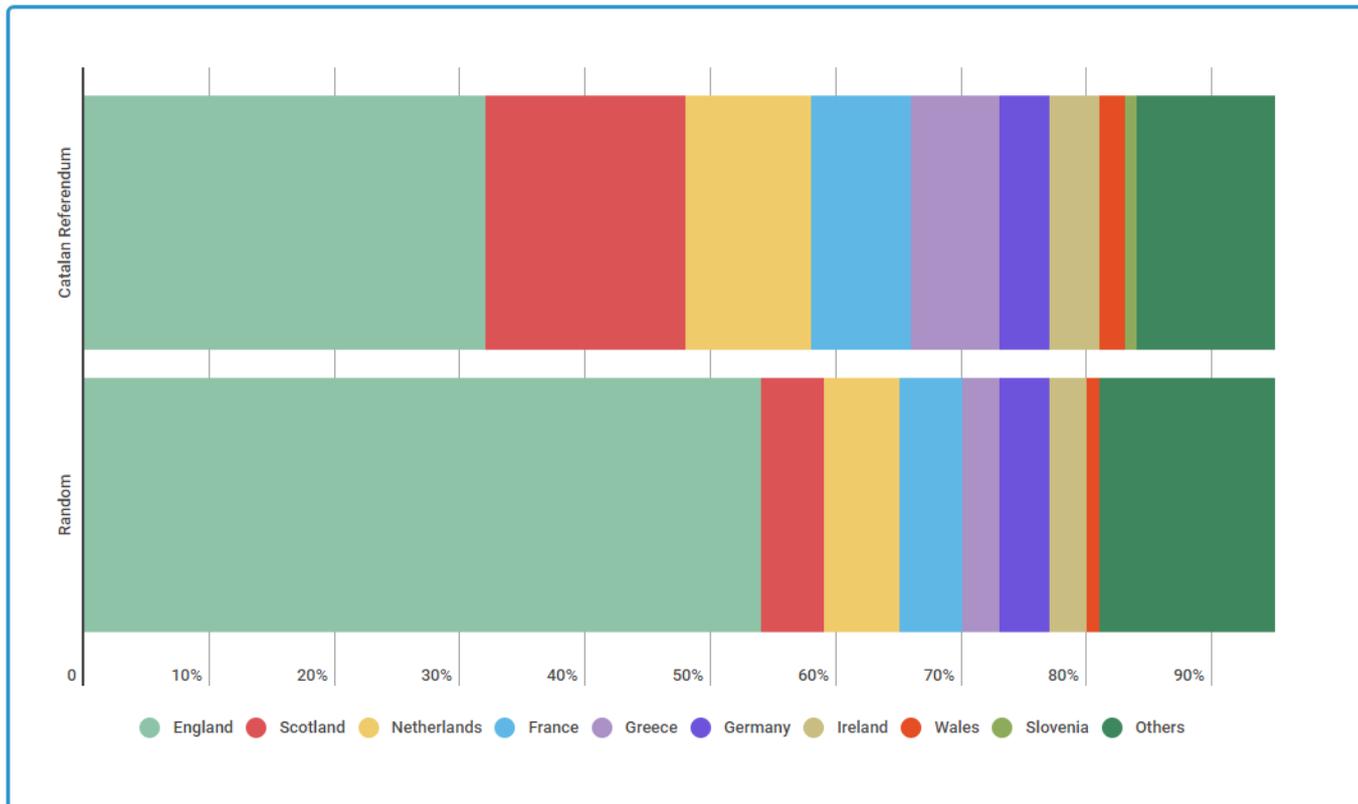


Figure 2: Country Share of #Catalanreferendum Tweets vs. Random Sample

As shown in Figure 2, some countries were relatively more engaged in conversations about the Catalan Referendum than they usually are about generic matters on Twitter. The most significant result is the percentage of tweets sent from **Scotland**, which is three times higher than average. It seems likely that Scottish users tweeted more about the Catalan Referendum than they usually do since **Scottish people** share with the Catalans a sense of obligation related to the claims to self-determination and independence.

Finally, we programmed a **Natural Language Processing algorithm to classify EU-related tweets** on the basis of the expressed stance towards the EU. Using this approach, we were able to sort out tweets which expressed a negative attitude towards the EU from positive or neutral ones. **We found out that 67.5 percent of EU-related tweets about the Catalan Referendum expressed a negative attitude towards the role of the EU in these events.**



Figure 4: EU-related Tweets and Sentiment towards the EU

After a qualitative examination of the “negative” tweets, we were able to **highlight the main features of these conversations**. One recurring theme was the idea that the EU should have taken a stronger stance against the violence in Catalunya and condemned the Spanish government’s way of dealing with the crisis. Additionally, **a negative attitude towards the EU seemed to prevail in conversations where the Catalan Referendum and the Brexit issue were associated**. Many users took the EU’s reaction to the Catalan Referendum as evidence that leaving the Union had been a good decision after all.

In order to gain a better sense of how this debate developed, **we looked at Twitter profiles of those who had most frequently mentioned negative opinion** towards the EU in the subset of EU-related tweets.

outside of Spain – especially in those countries that experienced independence claims (such as Scotland). Also, the role of the European Union in the ongoing turmoil surrounding the situation in Catalonia has been highly controversial and debated. As a result, a plethora of negative opinions emerged in the Twittersphere, highlighting the need for a stronger – or smarter – response to the Catalan crisis by EU leaders and institutions.

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