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# Twitter as a source for the history of the present : the 2015 Greek referendum as a case study

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## Introduction

Twitter data have been growingly used as a source for scholarly studies in various disciplines in recent years (Williams et al., 2013). The value of such born-digital data as primary source materials for future researches in history is already being acknowledged (Webster, 2015, Steinhauer, 2015). But, at least for now, historians seem rather reluctant to make use of them, although some recent works deal with the perception and memory of the past on Twitter (Clavert, 2016, Turgeon, 2014) or propose both documentation and analysis of present time events (Ruest and Milligan, 2016).

One possible reason of this reluctance could be the attachment of historians to traditional archival collections, e.g. those organized by professional archivists. But the creation of archives for social network sites data is not yet systematic and still in the beginning. As for the global Twitter archive of the Library of Congress, it is unknown when it will be functional (Zimmer, 2015). As it is possible for one to retrieve Twitter datasets, a second reason of this reluctance could be the need for acquaintance with basic methods and tools for gathering, understanding and analyzing born-digital data. However, not all historians are trained to digital humanities and quantitative methods that provide for such skills. Last but not least, the main reason could be the relation historians have with time. It has always been difficult to define the moving frontier between the present time and the recent past in contemporary history (Bédarida, 2003). As instant ephemera data that belong in the very present time, Twitter data precisely underline the difficulty for historians to define their own territory in these temporalities.

Nonetheless, for historians concerned with contemporary historical events – historical in the sense of a conjuncture that reveals a before and an after (Le Goff, 1999) – Twitter provides an original documentation. This documentation is generated in real time; organized around folksonomies – the hashtags – that reveal a direct perception from below; but also in close relation with media coverage. Since the creation of Twitter, a series of hashtagged global events (#IranElection, #15M, #Occupy, the 2011 Arab revolutions under various hashtags, the 2015 terrorist attacks in Paris...) update the concept of the monster-event (Nora, 1972) in that they are produced, lived, transmitted and shared in real-time around the globe – or at least in its connected parts. In spite of the known biases, mainly the fact that it is mainly used by relatively young and highly educated adults (Pew Research, 2016), Twitter offers an original kind of non-institutional primary sources (tweets) that can be complementary to the traditional ones the historians use.

This paper is a tentative to document and to provide a first analysis, based on Twitter primary sources, of the Greek referendum of 2015. This event has already obtained a distinctive status in the “before” and the “after” the current crisis marks in Greece's post-transition to democracy history (after 1974) (Avgheridis et al., 2015), although time and future historians will definitely tell. The paper considers the transnational phase of this event, which followed the Greek vote in favour of the “no” to further austerity measures, included negotiations in the instances of the EU and ended with the agreement of the Greek government to conclude a third harsh austerity programme. Our main research hypothesis is that the imbrication of different hashtags reveals different temporalities that allow researchers to construct regimes of historicity of an event.

## Event background

In the aftermath of the 2008 financial crisis, Greece, an EU and Eurozone member, began going through a severe debt crisis that revealed the structural weaknesses of the European monetary union and soon expanded to other weak members (Portugal, Ireland, Cyprus and Spain). Since 2010, the crisis has been managed through the setup of a European financial assistance mechanism in exchange for national programmes of structural reforms and budgetary cuts. Two such programmes were applied to Greece in 2010 and in 2012, plus a debt restructuring, that were monitored by the European Commission, the European Central Bank and the International Monetary Fund

(Papaconstantinou, 2016; Zettermeyer, 2013). The ongoing crisis provoked profound social and political transformations in the country that brought to power a coalition government led by the radical Left party of Syriza in January 2015. Syriza won the election with the promise to put an end to austerity politics. The party emerged in the context of the post-2008 crisis that shook the countries of Southern Europe and the 2011 Indignant movements, just like Podemos in Spain. Thus, the referendum of July 2015 was far from being significant only in the context of the Greek crisis as an effort of the new government to ameliorate the terms of the Greek programmes, as it put at stake different visions for the EU and its crisis management politics.

### Data collection and analysis: method and tools

Tweets using the hashtag #greferendum were collected with NodeXL, an add-in to MS Excel (Smith et al., 2009). The collect was setup once daily from July, 6 to July, 16 2015. The size of the gathered sample was determined by the capacities of the tool, that can collect a maximum of around 20,000 tweets at once. A total of 204,714 tweets were collected of which 139,945 are retweets (68,36 %), 8,686 responses (4,24 %), 56,086 mere tweets (27,39 %). Minor collects were also launched for other related hashtags (mainly #thisisacoup). Hashtag data were treated with OpenRefine and further explored with R software.

Statistical analysis of textual data (tweets) was made with TXM-Textometry software (Heiden, 2010). The corresponding dataset had been previously encoded following the TEI P5/XML standard with use of the [OxGarage](#) service.

Social network analysis and visualizations were made with Gephi software (Bastian et al., 2009).

### Data analysis: first findings

#### Hashtags

The first part of the research focused on reading the hashtags of the dataset. The hashtag #greferendum was used with a variety of hashtags, a total of some 12,000 words (all languages and variants included). A first study focused on the hashtags with a frequency over 99, which gave a total of 158 words. After an elementary typology was established, it was possible to distinguish: geographic names, names of persons, institutions, common names, neologisms that came out of contractions (such as “greferendum”), short phrases that had the function of commentary.

The use of hashtags varied between tag and commentary, or included both functions at once (Bruns and Burgess, 2011). The big majority of hashtags are in English (112 out of 158). However, in the thirty most frequent hashtags of the dataset, it is possible to find words in Spanish, Italian, French, and German. By consequence, the linguistic communities that participated in the global interactions were the ones that were the most concerned by the crisis. As for the Greek language, it is not entirely absent as such, but it is mainly present in its greeklish form: Greek words used as hashtags but written in Latin alphabet.

A close reading of the thirty most frequent hashtags with parallel consideration of the associations of words (cooccurrences) shows the tractations that followed the Greek referendum were basically perceived as an intergovernmental affair with the EU actors occupying a secondary position.

An interesting case is the emergence of the hashtag #thisisacoup as an act of solidarity of Spanish militants of *Barcelona en Comú* towards the Greek government during the Eurogroup and the Euro Summit negotiations (12-13 July). The corresponding dataset is more oriented to the expression of personal opinion than the dissemination of information with hashtags in the form of phrases that function more as commentary than tags (such as #yovoycongregia).

#### Domains

The most tweeted domains were twitter.com (7,352 tweets) and theguardian.com (7,217 tweets). In general, it is possible to distinguish two main tendencies. First, the dissemination of information in social media (Twitter, YouTube, Instagram, Facebook ). Second, the dissemination of authoritative information (international media, specialized independent blogs, personal blogs).

#### Communities detection

The network of the #greferendum corpus is composed by 103,733 nodes and 204,713 relations. After nodes with a degree higher than 10 were isolated (around 4% of the total), 326 communities were detected with Gephi (Louvain method). These communities need to be further explored, however the first findings for the most important of them show that affinities developed around sources of information (media), political and/or intellectual personalities, professional communities, and also linguistic communities.

### Conclusion

The network and the detected communities seem to have been structured around the dissemination of information but also political affinities and/or militancy. However, further exploration is necessary in order to better understand the network structure.

A quantitative analysis of the tweets, with emphasis on the associations between the hashtags, indicate coexistence of different temporalities within the temporality of the 2015 Greek referendum that are principally related to the Eurozone crisis, the associated national sub-crisis, and post-2008 anti-austerity movements. In this sense, Twitter primary sources offer insights from a transnational scale.

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