An Exploration of How People Discuss Brexit on Tumblr

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Abstract

In the era of digital media, the development of the public sphere is becoming more and more uncontrolled. With the rise of big data and social media, digital media researchers are no longer limited specific data and regions. In this research, Tumblr users basically experienced three stages of their daily discussions about Brexit from May 2016 to April 2017. This research applied a variety of collection and visualization approach, such as TumblrTools, Excel and Fephi, to analyzes users' perspective on Brexit on Tumblr. In addition, this study found that users' attention to the Brexit was affected by other events, such as US presidential election and the coming-to-power of Donald Trump.

Keywords

Brexit; Public Sphere; Digital Media; Tumblr; US Presidential Elevtion.

1. Introduction

The emergence and popularity of social media have long ignited the blurring of globalization and localization, especially when major events occur. As a new public sphere, social media has a large number of participants and a wide range of information, resulting to the question of how to distinguish the different opinions and modes of communication in global social media be a major challenge for current digital media researchers. Given the decentralized structure of social media, no matter the flow of information or the community participating in the discussion, the public sphere created by public political discussion is no longer limited to a specific virtual space, as the information could be spread in the vast global social media, which challenges the traditional research methods of social sciences. This report aims to analyze the communication behaviors of social media through the analysis of big data.

Given the great debate and controversy of Brexit referendum, changes in popular contents related to Brexit and the discussion volume from social media become a good perspective of observation to understand the public opinion. This report will analyze the 2016 United Kingdom European Union membership referendum (Brexit referendum) in Britain as a case study, because it is a political issue both locally and globally. It will illustrate how people discuss Brexit on Tumblr, focusing on the change of interest in the political discussion and the related topics of the Brexit discussion with the application of Tumblrtool and Gephi in more depth.

2. Social Media as A New Private and Public Sphere and Research Methods to Big Data in Social Media

When civic participation and democracy are discussed in the framework of traditional public spheres, citizen participation is negative and lacks power (Papacharissi, 2012). Therefore, Papacharissi (2012) explores the potentials of civic participation and democracy from the private sphere and argues that online social media appears in traditional public and private sphere structure has created a new public sphere, because the new technology allows spatial reorganization, inspire new social relations and dialogue, which could re-shape communication

habits of citizen. To be specific, social media is both a public and private sphere, in which the normal individuals are associated with others in public affairs from his private sphere (Brenne, 2016). Therefore, this social sphere of social media could be understood as a reconciliation between the public and private sphere. Citizens tend to feel safer to maintain individual autonomy in this private sphere and to integrate their public identity, as well as to control their public destiny (Fuchs, 2015). As a consequence, citizens are willing to return to such a private sphere to discuss public affairs and engage in citizen participation (Fuchs, 2015).

However, the huge amount of data generated by social media has brought new challenges to the digital media research. On the one hand, researchers have to consider how to obtain transactional data in social media such as Facebook, Twitter, and Tumblr; On the other hand, the collection and analysis of huge amounts of data might require the expertise of data experts and the professional knowledge of humanities and sociologists (Brenne, 2016). Therefore, it is necessary to develop appropriate social media analysis tools through cross-disciplinary cooperation to reduce the data analysis divide to locate insights from big data analysis (Manovich, 2011).

In social media, there are millions of messages per minute that are produced and circulated. Researchers are exploring and developing efficient methods of data collection and analysis to grasp the flow of public opinions in this new public sphere in the social media network. This report refers to the relevant research on the analysis of big data from Tumblr and attempts to collect and analyze the discussion of Brexit in 2016 as a case study to explore how people discuss Brexit on Tumbler and the spread of political discussion for social media research.

3. Data and Methods

This report applies for Tumblr as a source of data collection for social media. Although Tumblr might not be the popular social media in public discussion as Facebook or Twitter, the big data of Facebook or Twitter are usually not available to collect, while the useful tool of Tumblrtool allows is to get access to the big data of Tumblr conveniently with the observation of the flow of opinions in great events that have been tagged. What is more, given that Tumblr is of more than 500 million monthly active users during the period of the collecting data was posted, Tumblr to a large extent reflects the trend of how people discuss 'Brexit' in the social media. Consequently, Tumblr is taken as the source of data in this report.

Tumblr tool is a useful open-source tool to create network file from co-tagging on Tumblr. This report has applied for Tumblr to access to the posts that were hashtagged 'Brexit' and posted in the one-year period between May 2016, one month before the Brexit referendum (voted on 23 June 2016), and April 2017. The posting date and co-hashtagged has been analyzed with the application of Excel and Gephi, the network analysis and data visualization software. Each Tumblr post may have contained one or more of hashtags. This report has collected a total of 19,801 non-repeating Tumblr posts via Tumblrtool with the contents of posting time, post ID, hashtags, URLs and other data.

These data have been input to Gephi to generate data visualization after running the Force Atlas 2 algorithm with the objective to analyze what are the frequently co-tagged hashtag in the Tumblr posts with the hashtag of Brexit. Ten of these most frequently used co-tag have been divided into three classifications of 'European Union related', 'UK politics related', and 'US politics related' as well as being colored accordingly in Gephi. Also, the posting date of these Tumblr posts has been counted in Excel to analyze the trend of the discussion of Brexit on Tumblr.

To be specific, this report attempts to analyze what hashtags were frequently tagged in the Tumblr posts with the hashtag of 'Brexit' to illustrate how Tumblr users tended to express their opinions in the narrative of Brexit. However, it might be a problem that the hashtag-based data

collection method has the disadvantage of not being able to collect related discussions without hashtags. Given the difficulties in collecting big data with no hashtags, this report analyses the posts on Tumblr with the hashtags of 'Brexit' only.

Given that the data grasped from Tumblrtool might contain some content that,

Such as time stamps, unique post URLs and post IDs, this sensitive data of privacy has been removed from the research of this report or been desensitized before display in this report.

4. Key Findings

4.1. Monthly Discussion Volume Trends of Brexit
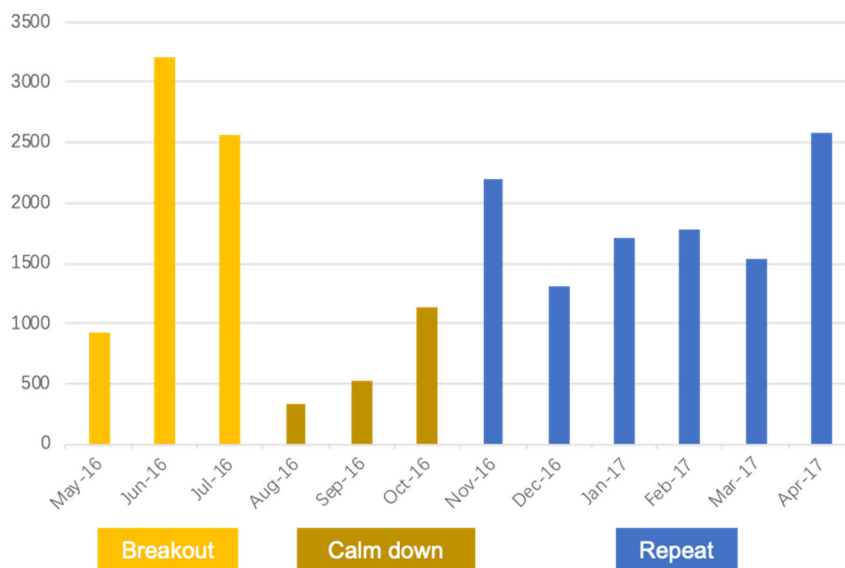
Figure 1. The monthly number of Tumblr posts hashtagged 'Brexit'

From the above figure of the monthly number of Tumblr posts hashtagged 'Brexit', it could be witnessed that there were three stages of the trends of Brexit in the daily discussion of Tumblr users: the breakout stage (May 2016 – July 2016), the calm down stage (August 2016 – October 2016), and the repeat stage (Nov 2016 -Apr 2017).

The first stage is the breakout stage, as the number of the Tumblr posts hashtagged 'Brexit' has increased dramatically, from less than 1,000 posts on May 2016 to 2572 posts two months later. This shows that the Tumblr users might not pay special attention to the Brexit referendum until the month of the general vote. Looking at the content of posts, it could be observed that most posts on Tumblr were about calling to participate in the Brexit referendum on 23 June 2016. This might be a reflection of the high turnout rate of 72% of the Brexit referendum, which was the highest national turnout rate for a UK-wide referendum at the national level.

However, after the final result was published, the discussion of Brexit had been widely spread in Tumblr as the number of posts hashtagged 'Brexit' peaked to 3212 and remained popular in the following month of the referendum. This might to a large extent due to the numerous votes of 'leave' and the final results of the win of 'leave the European Union' that was unexpected by many. It is worthy noted that due to the election effect, Tumblr users posted and forwarded many media reports after the referendum result was announced, leading to the large number of posts tagged 'Brexit' in June 2016, while most posts tagged in the following month were posted in early July, with a large amount of forwards about the journal reports on how Brexit would affect Britain and the coming-to-power of Theresa May.

The second stage should be considered as the calm down stage, in which the monthly number of Tumblr posts tagged 'Brexit' had decreased rapidly. The monthly number in August 2016

dropped to only 327, about 10% of its peak when the final result of Brexit referendum was announced. The monthly number in September and October 2016 had increased slightly, while most posts focus on the change in the British parliament and government caused by the public decision of leaving the European Union. This suggests that Tumblr users had dramatically lost their interest in the discussion of Brexit in the stage of calm down.

The third stage is named the stage of repeat, as the monthly number of Tumblr posts tagged 'Brexit' had recovered considerably since November 2016. The monthly number in November was 2,202 with an approximately 100% increase of the one in October, while the average monthly number of Tumblr posts hashtagged 'Brexit' was 1,115, far larger than the one during the calm down stage (650). This illustrates that the Tumbler users might be interested in discussing Brexit again since the end of the breakout stage.

4.2.   The co-tag of Brexit
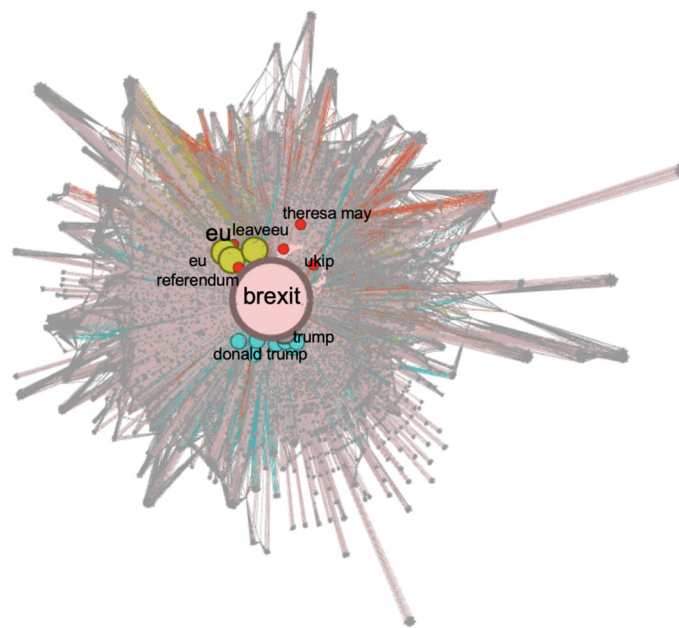
Figure 2. Data visualization of the co-tag of 'Brexit'

From the above figure of data visualization of the co-tag of 'Brexit', it could be observed that the most frequently used tags of Tumblr users when they tagged 'Brexit' in their posts were the European Union related tags, the UK politics related tags, and the US politics related tags.

Table 1. The most frequently used 22 co-tags of 'Brexit' in in the classification

the European Union related tags	the UK politics related tags	the US politics related tags
'eu referendum'	'politics'	'donald trump'
'eu'	'ukip'	'trump'
'leaveeu'	'uk'	'election 2016'
'european union'	'open britain'	'2016'
'europe'	'theresa may'	'us elections 2016'
	'britain'	'hillary clinton'
	'uk politics'	'presidential election'
	'united kingdom'	'election'
		'usa'

The European Union related tags include 'EU referendum', 'EU', 'Leave EU', 'European Union', 'Europe' and so on. These tags were most frequently co-tagged with the 'Brexit' before and soon after the voting day of Brexit referendum, that is, the breakout stage of the discussion of Brexit.

The UK politics related tags include 'politics', 'UKIP', 'Theresa May' and other tags that focused on the political circumstances of the UK itself. These tags seemed to be frequently co-tagged among all the three stages of the discussion of Brexit in Tumblr, however, they were the most popular co-hashtags in the second stage of calm down.

The US politics related tags include 'Donald Trump', 'Trump', 'US Election' and other tags that were very related to the presidential elections of the US in 2016. These tags were mostly co-tagged with 'Brexit' during the third stage of repeat stage, while 'Donald Trump' was the second most frequently co-tagged tag with 'Brexit' among all the co-tags, only followed 'EU Referendum'. These hashtags seem to be little related to the issues of Brexit to some extent, however, many Tumblr users co-tagged them with 'Brexit' to discuss Trump's comments on Brexit, to discuss what should the US learn from the lessons of Brexit referendum, as well as to discuss whether the public determination of leaving the European Union in the Brexit Referendum and the win of Donald Trump indicate the trend of populism and anti-globalization.

5. Conclusion

To sum up, there were three stages of the trends of Brexit in the daily discussion of Tumblr users: the breakout stage when the interests of Tumblr users in discussing Brexit peaked, the calm down stage when the discussion of Brexit decreased dramatically, and the repeat stage when Tumblr users' interest in Brexit came back considerably. The most frequently used tags of Tumblr users when they tagged 'Brexit' in their posts were the European Union related tag in the breakout stage; the UK politics related tags in the calm down stage; and the US politics related tags in the repeat stage.

Tumblr as a social media provides a public sphere that is private as well, leading its users to discuss Brexit from the individual perspective that is more close to their own interests. It is interesting noted that when Tumblr users were discussing Brexit in their posts, their focus varied from the stage to stage. At the very beginning, Tumblr users paid attention to the Brexit referendum itself in the breakout stage, as the unexpected result of the referendum to a large extent to draw their attention when these issues occurred. However, their interest in discussing Brexit decreased considerably very soon after the referendum result was announced, while the remaining interest focuses on the local political ecology changed by the public determination of leaving the European Union. Interestingly, their interest in discussing Brexit seemed to be back accompanied with the popularity of the discussion of the US presidential election and the coming-to-power of Donald Trump. This indicates that the depth and the width of the discussion of Brexit had been increased, as the Tumblr users' perspectives moved from the local influence on a global vision.

There are still many unfinished attempts in this research as a preliminary approach to research how netizens discuss political issues in the social media. I hope that such an attempt could help readers to understand the feasibility and limitations of big data analysis of social media. This report discusses the dynamic changes in the number of posts in Tumblr and the co-tags with 'Brexit'. In the future, further research could be conducted to analyze how to establish the possible indicators of social media and its representative meaning in the discussion of political issues, such as how do Tumblr users discuss Brexit in accordance with their nationality, as this might indicate the reason why Tumblr users had moved the discussion of Brexit to a global vision in the repeat stage and had been very interested in the discussion of Brexit again after a period when they lost their interests.

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