

# **A Tale of Cyberconflict in Greece: Polarization and Mobilization for the Greek Referendum on Twitter**

## **Introduction**

This chapter examines the hashtag #greferendum, focusing on both social and semantic networks (#Grexite, #oxi campaign), and it analyses Twitter data, which collected using NodeXL, on three significant days: the announcement of the referendum, the day of the bailout expiration and the actual date of the referendum. Data analysis draws on cyberconflict theory (Karatzogianni, 2006, 2015), to situate the Greek Referendum in the wider sociopolitical context of anti-austerity mobilizations in Greece and discusses the contribution of Twitter in the formation, polarization and mobilization within the context of a transnational networked public sphere.

To contextualize the empirical domain examined, on 27 June 2015, the Greek Prime Minister Alexis Tsipras announced a referendum asking Greek citizens to vote Yes (Nai) or No (Oxi) to the bailout conditions and agreement proposed by the so-called troika (IMF, EC, ECB). This was the first referendum after the collapse of Junta and the 1974 referendum, which supported the transition to democracy, abolishing the monarchy (Pappas, 2014). The mobilization of the 17<sup>th</sup> of June 2015 was among the first mobilizations since Syriza came to power, after the January 2015 (Khan, 2015). This mobilization took place 13 days before the bailout expiration and members of Syriza participated too. This was the first time that an anti-austerity mobilization was also perceived as being a pro-government mobilization. The mobilization of 18 June 2015 was organized in opposition to the 17 June mobilization, and the gathered people chanted ‘We stay in Europe’, indicating their agreement to the implementation of additional austerity measures (Koutantou, 2015). The political and ideological division between people participating in these mobilizations was intense, whilst the division escalated further after the announcement of the referendum.

This chapter concentrates on the analysis of the #greferendum hashtag, a term broadly used online and by the press describing the Greek referendum of 2015. This hashtag was among the most dominant of those days, trending in different countries and cities worldwide during the referendum period (27-30/6/2015 and 5-6/6/2015, trendogate.com). Here, the study of the #greferendum hashtag is taken as an indicative example of how Twitter was used during the referendum period, reflecting and supporting the offline sociopolitical turmoil, in what very much looks like a hybrid continuum (online and offline becomes seamless in reproducing the political crisis).

The study finds strong linkages between online and offline polarization and discourse with Twitter reflecting the offline political turmoil. It points to the development of social media discourse with a direction from below surpassing the limitations of corporate mainstream media actors. The No campaign is expressed online through the development of a concrete discussion, including critique of the Yes campaign, whilst

in the Yes campaign does not manage to dominate political discourse with a concrete ideology. This is significant as dominant commercial broadcasters and newspapers of the period were dominated by the Yes campaign.

At the international level, key countries play a significant role in the crisis context both at the Greek and EU level (e.g. Spain, Germany). Hashtags expressing solidarity to Greece are framed on the dilemma of the Future of Greece, Europe and EU values. Additionally, an examination of the Referendum on Twitter demonstrates linkages in the framing processes between the Referendum, the Syriza campaigns and the European left parties in terms of ideological discourse.

In outline, this chapter explains the cyberconflict theoretical frame of analysis and sets up the methodological premise from which to launch social network analysis and discussion of the Referendum social and semantic networks on Twitter.

### **Cyberconflict Theory as A Frame of Analysis**

Scholarly debates around the use of ICTs by non-state actors, such as NGOs, social movements, protest groups, insurgent, militant and terrorist organizations are far more extensive. For example, addressing surveillance and censorship issues (Fuchs et al., 2012; Bauman and Lyon, 2013); the impact of ICTs on the ideology, organization, mobilization and structures of social movements (Diani & McAdam, 2003; McCaughey and Ayers, 2003, Van de Donk et al, 2004; Dahlberg and Siaperas, 2007; Morozov, 2011; Bennet & Entman 2001, Coleman & Blumler 2009); the role of digital networked everyday media in supporting social movements and protest groups around the globe (Stepanova 2011; Castells 2012; Gerbaudo, 2016); and the influence of non-state actors in deliberating in the digital public sphere the ethics and rights in all levels of governance, such as migration, the environment, the rights of cultural and other minorities (Karatzogianni et al. MIG@NET E.U. 2012; Zuckerman 2013); and the use of ICTs by terrorist groups and online radicalisation (O'Loughlin and Hoskins, 2009; Libicki, 2009; Conway; 2012; Gray, 2013).

Cyberconflict theory was initially derived between 2001-2005 to situate conflict in digital networks in a historical, geosociopolitical and communications context. It relies on a combination of elements of three overlapping theories (digital media theory, conflict theory and social movement theory/resource mobilization. For the three theories and their integration see Karatzogianni, 2006, pp. 53-93). It was initially developed to explain pre-social media uses of the internet as resource or weapon of propaganda wars. Cyberconflicts of that period acted as a 'barometer' of real life conflicts of the participating groups. The protagonists in sociopolitical cyberconflicts fought for participation, power and democracy, while the groups in ethoreligious groups used the internet for as a propaganda tool, and to co-ordinate and fund attacks on opposing parties. The former adhered more to diffuse, rhizomatic horizontal fluid identities based on active desire for social change, whilst the latter adhered to more hierarchical closed fixed identities based on reactive desire with reliance on violence and exclusion (see Karatzogianni and Robinson, 2010).

The study of cyberconflict is developed based on four parameters. The first parameter focuses on the environment and the mapping of conflict. It examines the historical, sociopolitical, economic context and the digital development structure, in which Information Communication Technologies (ICTs) are utilized by competing actors to organize, mobilize, co-ordinate, fund and publicize their cause. The second, examines ICT impact on organization, mobilizing structures, framing processes, the political opportunity structure and the hacktivism. The third, focuses on the ethnic/religious affiliation, on chauvinism and national identity, on discourses (inclusion-exclusion) and on conflict resolution. The fourth, concentrates on representational and political economy aspects of the digital, such as social relations, identities and ideologies of antagonists, the control of information, censorship, and alternative sources, as well as examining who initiates, controls and dominates political discourse in a given cyberconflict scenario. These parameters are the platform from which the study launches its investigation into the Greferendum empirical case on Twitter.

### **Methodology: Research Design, Data Collection and SNA**

Twitter is among the most popular social media platforms and a new channel for public communication (Bruns and Stieglitz, 2013). Additionally, Twitter is considered to be a popular organization and computational tool for protestors, while it is also associated with many contemporary political movements, or as are also known 'twitter revolutions' (e.g. Occupy Wall Street Arab Spring, Indignados) (Tremayene 2014). While this online platform indicated micro-blogging characteristics, at the same time it is extensively researched focusing on its political potentiality, spreading awareness and information regards to activist social movements (Konelly, 2015). Also, Twitter provides researchers with rich data which are able to be multiple analyzed, answering different research questions (Tremayene, 2014). At the same time, this platform supports both the interpersonal and public communication, while the usage of hashtags coordinates online discussions, making them easy and tracked in real time (Bruns & Stieglitz, 2013). Such discussions are 'speedy and unstructured' (Giglietto & Lee, 2015, p.34) and therefore, hashtags studies reveal organizational and structural characteristics.

Polarization among conflicted ideologies or groups, as well as identification of opinion leaders and influencers, are some of the main points of consideration raised by the hashtag and Twitter study (ibid). Konelly (2015) draws attention on Bruns and Burgess who explained that hashtags have a significant capacity for cultural generativity (2011, p.3) as well as the emerge of 'creative, social, and communicative activities' in which users engage (Burgess, 2012, p. 41 in Konelly, 2015, p.2).

Focusing on twitter characteristics and under the theoretical umbrella of cyberconflict, the study of online conflict as developed during the referendum period indicates online networks characteristics and discourse, as well as, digital media contribution to the offline political and social developments of that era. Here, this study is set up to identify the way that the discourse #greferendum developed, pointing out differences between the #yes and #no campaign, as can be understood both in the Greek and European context. The examination of the #greferendum developed in two levels focusing on the structure of online social networks, as well as, on the examination of

semantic networks. The development of online networks and the discourse, as emerged according to the #greferendum hashtag, is examined focusing on three key dates of the referendum era; the announcement of the referendum (27/06/2015), the date of the bailout expiration (30/6/2015) and the day of the referendum (5/7/2015).

Data was collected and analysed using NodeXL. NodeXL is an add-in to the Microsoft Excel Spreadsheet software, which supports the development of networks through data analysis and visualization features (Hansen et.al., 2011, p.47). It is relative easy to use as it is designed for non-programmers, but still it is able to develop rich visual and analytics (ibid), enabling users to import online data, to develop network statistics and network visualization (sorting, filtering, and clustering) (Smith et.al., 2009). Using NodeXL, the examination of networks indicated structures, online coalitions, and dominant actors/set of actors, as well as, additional relations, which suggest important linkages to the offline world.

The data collected is analysed using Social Network Analysis (SNA). Wasserman & Faust (1994) explain that SNA 'provides a precise way to define important social concepts, a theoretical alternative to the assumption of independent social actors, and a framework for testing theories about structured social relationships' (1994, p.17). SNA is appropriate for the analysis and the investigation of 'kinship patterns, community structure, interlocking directorships and so forth' (Scott, 2000, p.2). The SNA supports the examination of different social entities or social units, including individual, corporate or collective social units (Wasserman & Faust 1994, pp.16-21).

The collection of the #greferendum developed gathering 10.000 relations for each of the examined dates (27/6/2015, 30/6/2015, 5/2015)). This material could be analyzed in multiple levels and focusing on different points. This study focuses on an overall understanding of networks, (structure, dominant items, etc.) as well as an insight on semantic networks and discourse. In contrast to big data, which support the in-depth understanding of online material and networks over a certain period of time, including millions of relations, the collected amount of data for this study does not represent more than hours of material produced online. Therefore, a simple way to understand the collected material in terms of time and data is to perceive each data set as a blink on the overall produced material of the examined period, which though is enough to develop an insight into communicative and structural patterns.

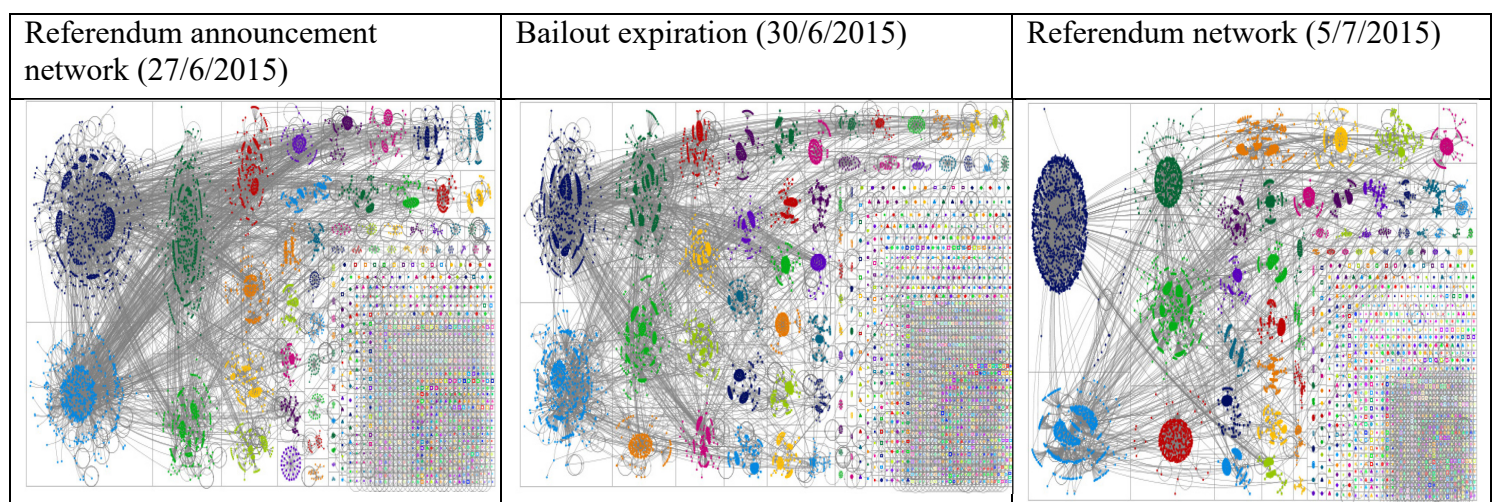
After data collection, the analysis developed through the examination of social and semantic networks. Starting from the understanding of networks, the analysis developed through the calculation of graph metrics, the visualization of data and the detection of groups. This process supported the identification of top items and opinion leaders or influencers in the networks. Subsequently, the analysis focused on meanings and discourse. At this stage, what is extensively examined is the information and the tweets based on which the users interacted, transferring and repeating/retweeting information and developing networks, pointing out how these process influenced identities and sociopolitical polarization. This procedure is based on the detection of the top hashtags, the top words and pair of words, through which new semantic network are detected. Based on the significant number of repetition of words and pair of words, and using the dominant words as nodes and the dominant pair of words as edges, three semantic networks match against the three examined dates. At a final stage, the analysis of these points demonstrate that the virtual

boundaries are blurred to the offline world, reinforcing or reflecting the social and political turmoil during this political crisis. Another important point of consideration focuses on the interlinkage between the online procedures and the offline development of the incident, either focusing on how one support each other, or in contrast, focusing on the distance between the online discourse and the offline development of the incident.

### Analysing the #greferendum

The data crawling conducted on 27/6/2015, 30/6/2014 and 5/7/2015, collecting the last 10.000 relations of each of the examined hashtag. After the calculation of the overall graphs' metrics, the data grouped by cluster using the Clauset-Newman-Moore algorithm (Clauset, Newman, & Moore, 2004) and resulted the following network structures:

Referendum announcement, Bailout expiration and Referendum Network, Table 1



The examination of the #greferendum and the online networks as developed on Twitter during snapshots of the most critical moments of the referendum period offer an insight into the formation of hierarchies, structures and communities. The referendum announcement network comprised by 5793 vertices and 8424 unique edges, and the collection material of 10.000 relation included data evolved from 27/06/2015, 11:17:08 to 14:07:26. The bailout expiration networks is consisted by 7400 vertices and 9400 unique edges, describing data produced from 30/06/2015, 18:24:57 to 01/07/2015, 00:23:59. Finally, the referendum network is comprised by 8194 vertices and 9904 unique edges, covering the period from 05/07/2015, 23:07:57 to 06/07/2015, 01:24:43.

What is suggested by these networks is that in all the examined dates, the #greferendum supported the development of a specific type of pattern and archetype of network structure, borrowing elements from the Broadcast network archetype, and the Community Clusters archetype (Smith et.al., 2014) (ibid).

The Broadcast Network is comprised by one large and many secondary groups, having inbound connections among groups and moderated unconnected participants, while usually developed around news media outlets or famous individuals (ibid). The similarities of the top items of the network are many, as usually the words, URLs or hashtags used in the groups raised by the dominant group and its characteristics. The Community Cluster archetype is consisted by many small and medium groups, developing moderate connections among them, while there are only a few isolated participants. This type of network emerges around global media topics, and indicates clear differences on the groups top items, as each group tends to develop suggesting different top items and discourse (ibid).

The examined network is consisted by one large and many small and medium groups, having many isolated users as well. Even if the examined networks do not indicate significant differences between the larger and the secondary groups, all of the networks are characterized by strong linkages among groups and users, indicating though a differentiation as regards to the top items (URLs, Domains, etc.). At the same time, there are also slight differences between the networks too. The first network's structure is designated by rich linkages among groups and users, in comparison to the latter networks, which are characterized by a lower level of density, moving from the Community cluster structure closer to the Broadcast network structure.

The broadcast archetype of network is emerged based on breaking news stories with many network members repeating 'prominent news and media organizations tweets' (2014, p.3). In this type of network power agenda setters and personalities with many followers have strong impact on the networks' discourse, however disconnected participants remain. This is an interesting characteristic, which highlights the importance of the topic and the examined hashtag. This is because there are users who have chosen to participate in the online discourse, without interacting with many people or their personal network. On the other hand, the Community Clusters network highlight the importance of the smaller groups and hubs, with each one having its own center of activity, influencers and sources of information. In most of the cases the multiple conversations illustrate diversity of opinion and audiences, while this type of network emerges based on global news stories (ibid).

While the structure of the networks already suggests some characteristics, we can also gain an insight into the dominant actors of these networks, around whom groups emerged. While this point is possible to be studied focusing on different characteristics (e.g. followers, date joined twitter, description of accounts, time zone, etc.), we can also consider whether the dominant actors are average users or accounts of media and political actors. Additionally, we can examine whether these dominant users interact repeating mainstream media's tweets and political material, or develop alternative discourses and content.

After the calculation of the graphs' metrics and especially focusing on betweenness centrality, it is suggested that the nodes having strong influence in the network, bridging different clusters and nodes, are the following (Cherven 2015, p.195):

Influential nodes and actors according to betweenness centrality, Table 2

Referendum announcement network (27/6/2015)	Bailout expiration (30/6/2015)	Referendum network (5/7/2015)
greekanalyst jodigraphics15 j_dijsselbloem kkarkagiannis lilyinfidel atsipras traynorbrussels	Gmourout Manosgiakoumis jodigraphics15 joannap____ Ertsocial Iratgreek Prognosismedia Atsipras Markospoulakis	Thereaibanksy Aaronsidewhite Harryslaststand suttonnick futile democracy georgemorina sickjew

The most influential nodes/actors in the examined networks are politicians (j\_dijsselbloem, atsipras, gmourout, etc.) and media related users (ertsocial, suttonnick, kkarkagianis, traynorbrussels.), while only few users are related to activism and independent or alternative media (lilyinfidel, markopoulakis, jodigraphics15, joannap\_\_\_\_, iratgreek, sickjew), including political and media analysts (prognosismedia, greekanalyst, etc.). The majority of the dominant nodes/actors are accounts from Greece (e.g. politicians, activists, media, etc.), although there are also dominant nodes/actors from other countries as well (e.g. UK).

These were the most influential accounts, which acted as hubs, around which groups and sub-networks developed. The examination of the dominant domains indicates the source of the transmitted information, developing an insight on how different platforms and media sources related to Twitter discourse.

Dominant Domains, Table 3:

Referendum announcement network (27/6/2015)	Bailout expiration (30/6/2015)	Referendum network (5/7/2015)
twitter.com naftemporiki.gr r youtube.com newsit.gr piraeusview.gr facebook.com antenna.gr bloomberg.com m ilfattoquotidiano.it protothema.gr	twitter.com referendum2015gov.gr theguardian.com youtube.com commonsense.scot facebook.com naftemporiki.gr instagram.com megatv.com ert.gr	twitter.com trib.al youtube.com gu.com co.uk facebook.com nytimes.com bbc.com cnn.com theguardian.com

In all of the three examined networks, the dominant domains are consisted mainly by mainstream media platforms (antenna.gr, bloomberg.com, theguardian.com,

naftemporiki.gr, bbc.com etc.) and social media platforms (Twitter, YouTube, Facebook, Instagram). A comparison between the three networks suggest that the Greek domains appears mainly on the first and the second network, however, the international domains and platforms have a significant role in all of the examined networks.

Significantly, in contrast to the dominant actors, which were mainly from Greece, the majority of the dominant domains of the networks were international or other countries, other than Greece. This is a point which is in line with the role of Greek and international media, both online and offline, and their contribution/representation of the Greek referendum (e.g. announcement of the referendum and media representation, exit polls, etc.) and the Greek crisis (Antoniades 2012, Mylonas 2014, Theocharis et.al. 2015). At the same time, such discussion should be situated within the wider consideration regards to the Greek media system and the crisis, both in terms of structural characteristics (ownership, corruption, media crisis etc.) (Doulkeri and Terzis 1997, Sims 2003, Smyrnaio 2010, 2013), as well as in terms of crisis representation (how crisis mediated, Greek/EU representation and differences).

After the understanding of the networks, what is important to be understood is what kind of information these network communicate and transfer, in terms of information, ideology or, in extend, identities. This approach suggests a multidimensional analysis and is possible to be concentrated in different points, although what is examined at this stage, is the overall understanding of the semantic networks, as raised by the study of dominant hashtags, dominant words and pair of words, suggesting an insight in the discourse as shaped online. The top hashtags of the network are the following:

Top Hashtags, Table 4:

Referendum announcement network (27/6/2015)	Bailout expiration (30/6/2015)	Referendum network (5/7/2015)
greferendum dimopsifisma greece grexit vouli eurogroup yovoycongregia tsipras topotami referendum	Greferendum Greece Dimopsifisma Grexit Yeseurope Oxi Greececrisis oxi2015 Tsipras team oxi	greekreferendum Oxi Greece grefenderum austerity Grexit Greeks greferendum greececrisis oxi2015

Considering that the collection of the data conducting searching the hashtag #greferendum, it is not unexpectedly that this hashtag appears in all of the examined networks, although at the last network it appears at a lower position than in the first two. Indeed, the political and social considerations, as well as, the media discourse indicated significant changes parallel to the evolution of the incident, while the day of the referendum is a turning point for the political debate and emerging discourses.



In the first network the dominant hashtags are related to the referendum (Greferendum, dimopsifisma, referendum), the Eurogroup negotiations and the negotiations/debates of Greek parliament (vouli). At the same time, the discussion and the hashtag #grexit is in a high position, among not only among the dominant hashtags, but also on the press and the political turmoil. Nonetheless, Grexit is the concept around which the pro-/anti-austerity debated developed, as well as strong political debates, after 2008 and the rapid development of the crisis (Vasilopoulou & Halikiopoulou 2013).

The hashtag #yovoycongreceia is part of the online campaign #istandwithgreece, which developed based on this phrase translated in different languages, circulating on twitter for days, expressing solidarity to Greece. Later on this campaign linked to the campaign/tread #thisisacoup expressing not only solidarity but opposition regards to the political turmoil and the austerity politics. Even if these campaigns expressed solidarity, a more detailed study on the referendum hashtags could highlight who participated and supported the campaign, participating in the online discourse, revealing whether and how this developed from below. Hashtags related to the Greek political scene, such as #tsipras and #topotami, appear on Twitter discourse very often, rapidly changing positions according to the current affairs developments and incidents (e.g. parliament speech during the data collection, etc.).

At the second network the debate and the contrast between the campaigns Yes/No is clear. This debate could be understood as a transformation of the anti-/pro-austerity debate, which before the referendum expressed to the anti-/pro-governmental mobilizations organized on 17-18/6/2015 (Fraser 2015, Waerden & Fletcher 2015). While the anti-austerity protests during the crisis era was not a rare phenomenon, after the elections of Syriza on January 2015, the context of such mobilization changed and from anti-austerity and anti-governmental mobilizations, turned to pro-governmental, pro-Syriza mobilizations, which nevertheless continued to express opposition to austerity.

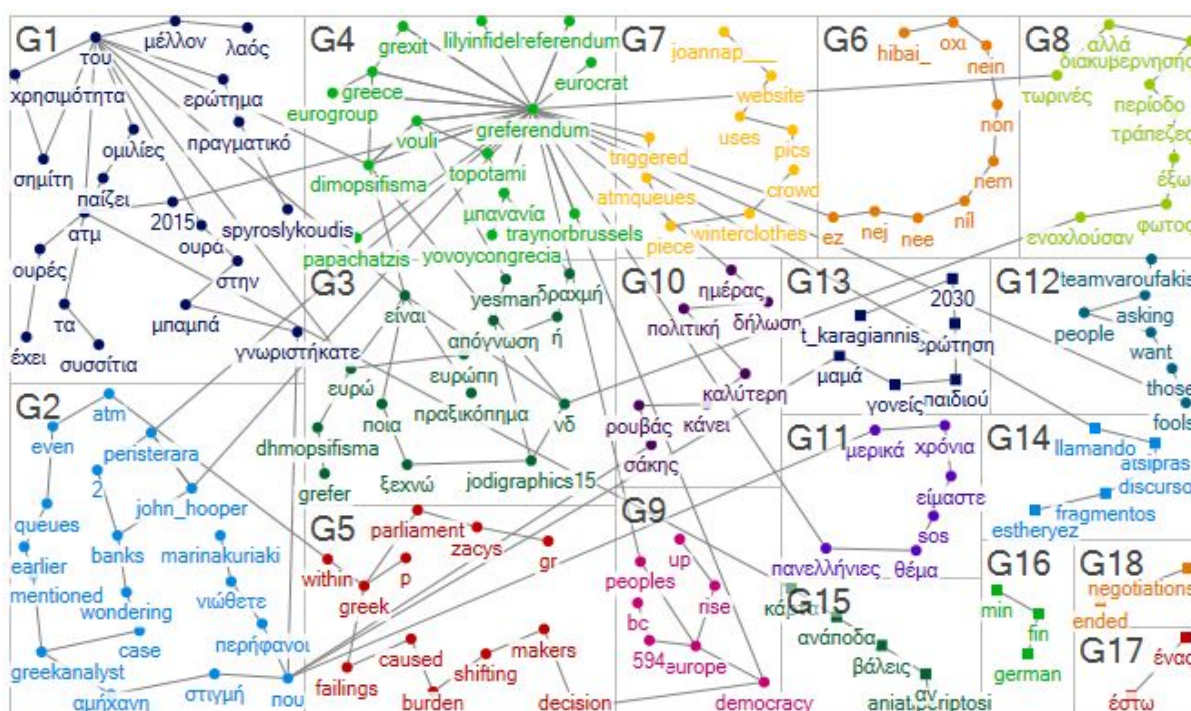
After the anti-austerity protests, which took place on 17/6/2015, the first pro-EU (menoumeevropi) protest took place on 18/6/2015 in Athens and other cities. The anti-austerity mobilization and campaign, which partially was a pro-Syriza and pro-governmental campaign, linked with key words and hashtags such as #oxi (means no in Greek) and #oxi2015, which could consider to suggest a symbolic parallelism to the historical usage of the words (e.g. WWII and the national celebration of 'OXI'). On the other hand, #yeseurope and #menoumeevrpi, which means 'we stay in Europe', was among the key words and hashtags representing the yes campaign. These hashtags were also criticized in terms of symbolic meaning and historical continuity (e.g. discussion on capitalism and neo-colonialism).

As expected, the dominant hashtags of the last network are straightforwardly referred to the referendum and its result. Hashtags related to the #greekcrisis, the #grexit and #greferendum have been observed at the previous examined networks, although the hashtag #austerity is appeared again among the most dominant hashtags. The hashtag #austerity was also dominant during the 17-18/6/2015 anti-/pro-austerity and anti-/pro-governmental protests with the #austerity hashtag was among the most dominant hashtags in the network developed mainly before and after the referendum.

Beyond the discussion on dominant hashtags, the examination of pairs of words suggest a more detailed understanding on the meaning and ideas noticed in the examined networks. A major difference between the dominant hashtags and the dominant words, or pairs of words, is that the hashtags are used as description or title, selected by the users, who themselves describe or categorize their statement/tweet. Even if each hashtag is possible to be used and understood as having multiple content and purposes (e.g. usage of hashtag denoting irony, facts, humor, etc.), there is a specific direction in terms of meanings. In contrast, the dominant words or pair of words reveal more information regards to meaning and discourse, without denoting or suggesting any direction in terms of understanding.

After the overall graph metrics calculation and the calculation of the top items, then, the calculation of top words and top pairs of words supported the development of semantic networks. These networks developed through the examination of the most mentioned words and pairs of words, which perceived as nodes and edges, suggesting an in depth study of the how meaning and discourse emerged.

- Referendum announcement Semantic network (27/6/2015), Figure 1:



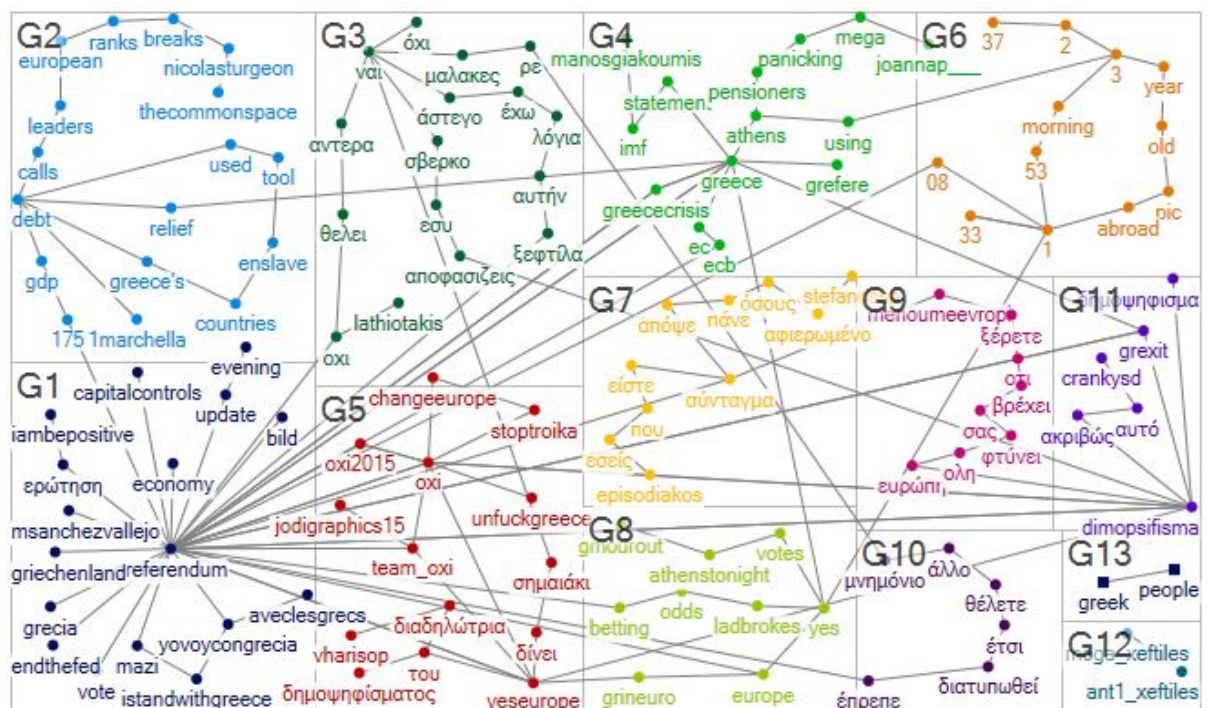
The searched hashtag #greferendum is at the centre of the semantic network and the strongest connected node. This is clearer when the visualization is not developed in groups and boxes, however this approach highlights the differences between groups and discourse. The different languages noticed in the network pointed out the international interest for the referendum, highlighting the participation of countries which, directly or not, are involved to the political turmoil and the austerity debate, as well as, the north-south debate/discussion (Freire et. al. 2014). Capital controls (G1, G2) and the banks (G2, G8), appeared on the graph, mainly due to the users who update

information on the issue as well as due to critics and comments on the issue. At the same time the historical importance of the period is highlighted mainly through a humorous approach (G1, G11).

While there are many groups, which developed political oriented discussions and debates, group 3 includes significant keywords which denote the political debate of those days and the yes/no campaign (yesman, coup, drachma, etc.). Group 9 keywords are related to the discussion regards to austerity and democracy as well as the people who should rise up, close to the Syriza rhetoric (Protothema.gr 2014). This was close to the pre-elections Syriza campaign rhetoric, as well as the rhetoric adopted by different left European parties, which in most of the cases highlight the austerity effect on democracy and democratic values.

An overall evaluation of the semantic network indicated that the discourse developed after the announcement of the referendum was characterized by a ‘carnivalisque’ and satirical sentiment (Kaika & Karaliotis 2014, pp.10). While the political debates and the ideological division of those days is visible, still the limited political discussion and the ‘carnivalisque’ character of the discourse, indicating the danger of not having a revolutionary moment reinforcing the democratic politics, but instead to develop an urban fest similar to the example of the Greek Indignados (ibid).

- Bailout expiration Semantic network (30/6/2015), Figure 2:



The second examined date of the referendum developed in consequence and having many similarities to the previous examined semantic network. As expected the searched hashtag #greferendum, has a central position in the graph (G1). Although, at this network the hashtag #dimopsifisma, which means referendum in Greek, written using Latin characters, has also a high linked position in the graph (G11). The larger group, group 1 is consisted by words both in Greek and in English, while the content

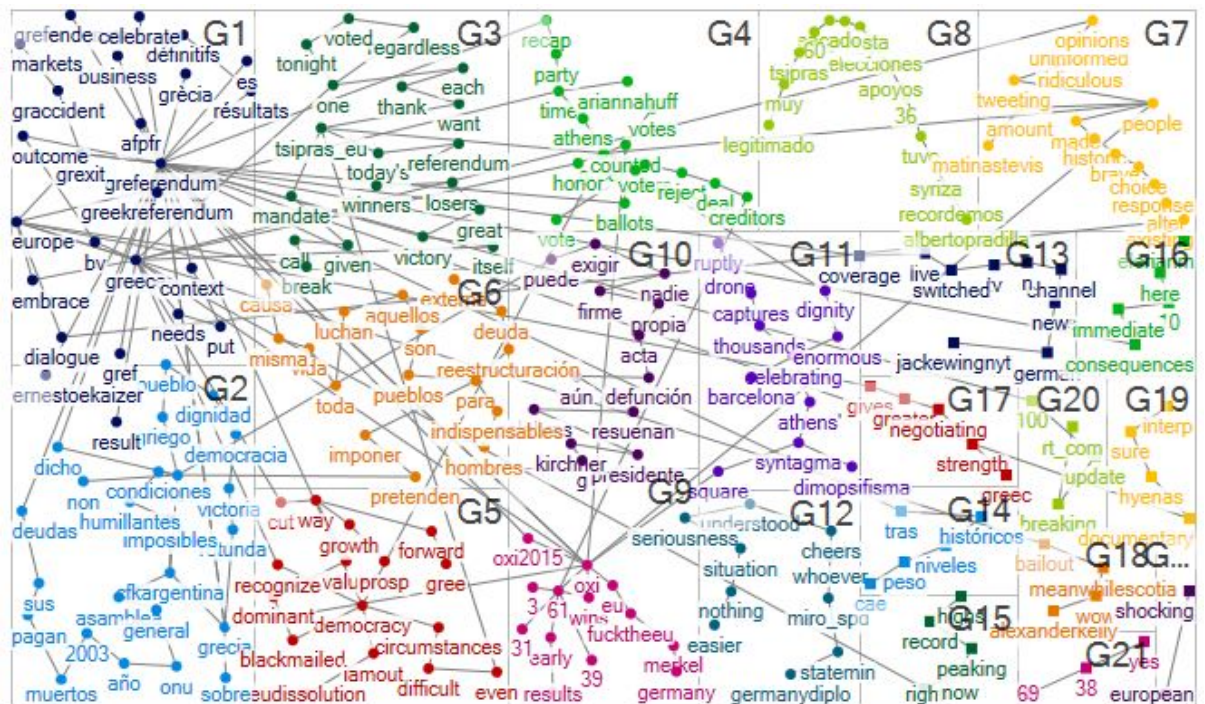
of the meanings developed in the group are related both to the development of the incident giving information and updates, as well as to the expression of solidarity. At the same time, hashtags in different languages (aveclesgrece, yoyvoncongrece, istandwithgreece) used as statement supporting Greece, indicating the way that the European solidarity campaign developed.

Throughout the graph the division and the debate raised by the #yes and #no campaign is expressed much stronger than the previous examined semantic network (G3, G5, G9, G8, G10). The #no campaign expressed strong critiques to the #yes campaign, indicating the referendum as an issue of dignity (G3, G9). At the same time, there is a strong linkage between the #no campaign and the discussion regards to troika, the European politics and the effect to Greece (G5, changeeurope, troika, unfuckgreece), which developed both in Greek and in English. Once again at this point the nature of the crisis problem could be set under consideration, focusing on austerity and the crisis as having both Greek, European or other dimensions (G5, G2). The debt is discussed as a medium of controlling and enslaving countries (G2), while the necessity for changing Europe is highlighted too (G5), developing a parallelism to the contemporary political rhetoric and debates (e.g. Euroscepticism, change Europe and european left, Syriza, etc.).

The #yes campaign didn't achieve to express specific ideas, critiques or considerations in the online discourse. Instead, its position in the graphs indicates that key words related to the campaign are either points of critique or part of news and updates regards to the progress of the event (G5, G3, G8). Another interesting point indicated by the graph is the strong linkage between the referendum and the so-called grexit (G11). Group 13 highlights the dispute on the mainstream media, pointing out the structural problems of the sector (e.g. ownership, corruption). At the same time, the role of the mainstream media as an institution and its contribution to democracy as well as its relation to society, in terms of representation is under consideration throughout the crisis and the referendum era.

- Referendum Semantic network (5/7/2015), Figure 3:





The evolution of the hashtag of the #greferendum in the examined dates shows that there are much more groups and themes of discussions as the events evolved. The graph of the semantic network, as shaped by data produced on the day of the referendum, suggested a more plural and rich discourse, in comparison to the two previous sentiment networks, developing a quite noisy graph with high density. Also, there is a change regards to the languages used in the discussion, where English and Spanish are dominant language in contrast to Greek. Indeed, the day of the referendum the international interest was high, and therefore it is not completely unexpected that there are less groups and discussions in Greek.

At this semantic network, the searched hashtag #greferendum is at the same group and strongly linked to the keywords grexit and Greece (G1). The main discussion developed at this group is related to the referendum results and the consideration regards to the banks and the markets, while terms such as 'graccident' appeared for the first time in so high position in the graph (G1). Throughout the Greek crisis and especially during the referendum period, the discourse of fear was a dominant strategy, both for media and politics, justifying the implementation of austerity politics. Thus, concepts such as grexit, or the implementation of anti-austerity politics are the main political debates since the beginning of the crisis, defining the restructure of the Greek political scene after the collapse of the two party-system. At the same time, focusing on the dangers of an accidental or organized grexit, the political parties which emerged in the crisis context (Syriza, Golden Dawn, An.El., Potami, etc.) developed according to their position within the pro-/anti-austerity debate and the wider Euroscepticism discourses.

A major consideration during the period of the referendum is how the political and social polarization of the #yes and #no supporters, expressed in the offline world and in the post referendum era. The ideological and political division raised by the referendum was the basic point of critique. Therefore, it is not surprising that group 3

is dominated by keywords from Tsipras and Syriza statements on the referendum results, framing the referendum as a victory for democracy, both focusing at national and European levels and independently to the conflicted sides and votes (winners, losers, great, victory, itself, Tsipras eu, today's, winners).

Groups 2, 6, 8, 10 and 14 developed in Spanish, reflecting the strong political affiliation between the voters' concerns and the parties of Syriza and Podemos, as well as the common consideration regards to the crisis and the austerity politics in the countries of the European South (luchan, which means fight, grecia, dignidad, reestructuracion, legitimado, tsipras, general, assemblies etc.). This is also suggested by group 11 (Athens, Barcelona, dignity, drones, captured, celebrating, syntagma, etc.)

In group 5, the word democracy is at a central position and strongly linked to keywords such as recognize, dominant and blackmailed. This is an interesting observation especially considering that the #thisisacoup hashtag was trending the days after the referendum (17-18/7/2015). This hashtag raised strong consideration and discussion, both in academia and in the press, regards to the democratic values, the EU and the austerity politics. Similar considerations are also expressed in the group 9, where the words oxi is in a central position in the sub-graph. This group included words such as oxi, oxi2015, eu, fucktheeu, merkel and Germany, highlighting the dispute on the European project and the austerity policies. The meanings developed in group 5 and 9 are linked to group 1, while there are many linkages to other peripheral groups. In these groups, the political polarization is high, expressing strong critics and conflict of interest between EU politics and the people.

Group 17 highlights that the referendum could be an asset for the negotiations with troika (strength, negotiating, Greece), group 12 highlights how critical the situation is (understood, seriousness, situation, voting) and group 21 suggests that the referendum and its results might be unexpected (shocking, european).

## **Online Reproduction of Polarization and the Dominance of the No Campaign**

The study of #greferendum indicated strong linkages between the online and the offline political polarization and discourse. At the same time, this example highlights that online and social media platforms have the ability to develop discourse with a direction from below, overlapping the limitations of the mainstream and offline media. However, considerations regard to who has access online, percentages and profiles of Twitter users, are points which should be under consideration too. Twitter seems to effectively reflect the offline political turmoil, supporting the political debate and polarization. It is indicative, that while the mainstream media in Greece strongly supported the #Yes campaign in the online discourse, the ascendance of the #No campaign is obvious almost immediately after the announcement of the referendum. Even if the #No dominant actors in most of the examined networks are not average users and accounts, they do not manage to dominate the networks in terms of ideas and discourse.

These social and semantic networks were steeped in sociopolitical cyberconflicts. The usage of Twitter strongly affected the framing processes in relation to the referendum, pointing out the political linkages between the referendum, the Syriza campaigns and other examples of European left parties in terms of discourse. At the same time, the conflict in terms of meanings and ideology, focusing on the Yes/No campaign is clear. The #no campaign is expressed online through the development of a concrete discussion regards to the rational of the political choice of #no vote, including critiques on the #yes campaign and vote. In contrast, the yes campaign does not manage to dominate networks and discourse, while, most importantly, did not manage to express concrete ideology online.

The international attention to the referendum is observed throughout the study of #greferendum, with the participating countries having an important role in the crisis context both in Greek and Eu level (e.g. Spain, Germany). Hashtags expressing solidarity to Greece (e.g. #istandwithgreece, #aveclesgreecs, #yoyvoncongrece) highlighted the European aspect of the Greek referendum dilemma, not only regards to the future of Greece, but most importantly on the future of Europe and European democratic values.

In conclusion, this study of the #greferendum provides an insight on how social media data can be used for the examination of a sociopolitical cyberconflict to gain an in depth understanding of social and semantic networks in critical moments in the evolution of a conflict. The development of alternative structures and networks, both online and offline (e.g. solidarity networks, online media projects, alternative discourse, etc.) indicate the potentiality of digital media in the crisis context, as well as the limitations of the traditional media and political structures. In the case of #greferendum, Twitter was used as a tool for communication and organization, in terms of referendum information and updates, while at the same time the participation of isolated users as noticed in the networks, may suggest how Twitter recruits and attracts users in the online discourse and additionally, how effectively these procedures are reflected offline.

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