

# Draft – Comments greatly appreciated

## **Attitudes towards political discontent – Government responses to contentious politics in Twitter**

Camilo Cristancho

Universitat Autònoma de Barcelona  
[camilo.cristancho@uab.cat](mailto:camilo.cristancho@uab.cat)

Mariluz Congosto

Universidad Carlos III de Madrid  
[mariluz.congosto@gmail.com](mailto:mariluz.congosto@gmail.com)

Silvia Majó Vázquez

Universitat Oberta de Catalunya  
[majosilvia@uoc.edu](mailto:majosilvia@uoc.edu)

Challenging the statu-quo through contentious action is a central component of democracy and the form of political action in which conflict is most evident. Yet contesting political choices rests on the premise of public acceptance. This is why social movements aim at changing public opinion perceptions in order to find support for their claims. Research on support for social movements and contentious politics has focused on survey based research that taps into sympathy towards contentious actors and acceptance of their forms of action, as well as in media accounts of protest. In this paper we provide an exploratory approach of attitudes toward contentious politics in Twitter in order to capture a broader picture of attitudes towards contentious politics. We move forward the research by studying the expression and diffusion of attitudes towards actors, their grievances and repertoires and look into differences between responses of political elites and the public in Twitter. Evidence from ten cases on Catalan/Spanish nationalism, against house eviction and on the *Indignados* in Spain between 2011 and 2013 speaks to the potential of government responses to contentious politics for influencing public reactions. The diversity of repertoires and grievances in our sample provide external validity to our findings on the influence that political elites and public opinion leaders have on the attitudes of issue-specific publics on Twitter.

Keywords: Protest, Attitudes, Social media, Twitter, Contentious politics, government responsiveness

---

This study is partially financed by a research grant from the Agència de Gestió d'Ajuts Universitaris i de Recerca for the quality of democracy - Generalitat de Catalunya. We wish to thank Neus Bonnín and Pedro del Real for their invaluable help in data processing and Marco Giugni and Pablo Barberá for their insightful comments.

## Introduction

Challenging the statu-quo through contentious action is a central component of democracy as a way for expressing dissent and for taking action outside of the electoral arena. This implies that dissent is explicit and it aims at a provoking a reaction by those who are being challenged. However, it also rests on the premise of public support.

A central outcome of political protest is to change public opinion perceptions in order to find support for their claims; especially considering that perceptions of social movements are critical in determining their success (Koopmans 2004, Skrentny 2006). This can be studied by considering attitudes toward social movements which comprise not only a positive perception of the actors themselves, but also of their actions and their claims in particular moments (Barnes & Kaase 1979, Klandermans & Oegema 1987). In this sense, we question to what extent support for challengers of the system is related to attitudes toward their grievances –the substantive dimension of protest- or to attitudes towards their repertoires –the more procedural dimension (i.e. strikes, marches, petitions, rallies, sit-ins, occupying divide, disobedience, cyber-attacks, donation, boycott, etc...).

The aim of this paper is to explore public support for to contentious politics in Twitter. It is set out to assess the expression of attitudes towards challengers, grievances or repertoires in issue networks and the role of political elites<sup>2</sup> in shaping this response. An exploratory analysis is proposed including factors that explain positive attitudes as compared to negative ones. We explore the incidence of tweeters' (individuals posting tweets) attributes and media attention to the issue and make a distinction between actors, grievances or repertoires in order to consider multiple attitude objects.

We start by analyzing political responses to protest by political elites and exploring differences between parties. This description provides further understanding on the role of government responses as compared to opposition or extra parliamentary parties, and to general users (tweeters who are not involved with any party). We then consider the potential influence of political elites as compared to general users. The potential influence of party-affiliated tweeters is a central question when studying party responses. We look at the differences between four roles of potential influence in order

---

<sup>2</sup> We adopt a broad definition of political elites that includes party members, associations and a few opinion leaders that have been listed by parties on their party lists in Twitter.

to consider the dimensions of visibility and centrality.

We find that support for grievances and repertoires is significantly smaller than support for challengers, with important differences across cases. Our evidence shows that political elites support contentious politics less than the general users in Twitter but that they have a marginal involvement in Twitter and less potential influence levels than general users. However, this pattern is not the same for all parties as extra-parliamentary parties have an opposite effect. This speaks for the role of parties as gatekeepers and of the relevance of the relationship between movements and electoral politics, especially for small parties.

The paper proceeds as follows. Firstly, we introduce the literature on attitudes towards protest and its relationship with media accounts of protest. In a second section we discuss our approach to support for contentious politics and present the aims of our exploratory analysis. In the third part we describe our data and methods. We continue with a description of findings and in a fourth section we present and discuss the results of the multivariate analysis. We close with very brief provisional conclusions and our plan for future research.

### **Attitudes towards protest and media accounts of protest**

<Knowledge gap in the field of study>

A long tradition on public opinion research has been concerned with tapping sympathy towards groups of individuals challenging the statu-quo and for accepting their forms of action. This research has studied the formation of public opinion in divisive issues by focusing on the salience of conflict and how publics position themselves on the divide (Stimson 2004). The first empirical studies in this regard sought to explain the perceptions of contentious actors, their claims and their repertoires of action for the civil rights movement in the United States (Olsen 1966, Turner 1969). These studies found that social acceptance of various forms of nonviolent protest varied depending on individual factors and context, as well as on the groups in question. Research on attitudes towards conventional and unconventional forms of political participation was carried on later through survey studies of political behaviour in Western democracies (Barnes & Kaase 1979). From these early empirical approaches, broader studies dealt with the acceptance of contentious actors as adversaries who formally represent legitimate interests (Gamson 1990), with how the State co-opts or recognizes

challengers (Amenta *et al.* 1992) and how challengers can generate changes in social values regarding politics (Rochon & Mazmanian 1993).

Perceptions of protest follow the logics of public opinion dynamics and are consequently related to issue accounts in the media and to unstable support as expressed in public approval rates (Kriner & Schwartz 2009). Research on issue evolution has studied conflict salience and public opinion divisiveness considering the relevance of issue publics and their potential for changing support towards particular issues (Hutchings 2005). This explains an important part of issue politics and its relation with electoral processes (Stokes 1963), party positions and government responses. However, identifying issue publics and following the evolution of their stances is a challenging endeavour not only for methodological reasons but also for the complexity involved in understanding multiple issue dimensions, actors and behaviours. We propose that a more detailed account of attitude objects and the process of public opinion formation is relevant to understand public responses to contentious politics.

### **Differences between challengers, grievances and repertoires**

More recent studies have addressed support for contentious politics considering the complexity of minority expression. They question public division on contentious issues and the responses of political elites to street demonstrations and study how issue attitudes interact with perceptions of the actors, their repertoires and the degree of contentiousness (Van Aelst & Walgrave 2001; Thomas 2012). However, the relevance of this question does not match the empirical attention it has received. While the research in political protest paid careful attention to the attitudes towards modes of action (Barnes & Kaase 1979, Olsen 1968, Robinson 1970) the issue is today far less discussed within the literature on political participation. In spite of the political and social debates around the legitimacy of contentious action we have little recent analysis on how people perceive it. A line of research that has dealt with this issue is the study of media representation of politics. Koopmans (2004) proposes that the legitimacy of social movements is a media selection mechanism that affects the diffusion chances of contentious messages.

Still, we have little information on affective and evaluative attitudes towards participation modes. This is important to assess protest and participation potential, the

perceived costs and benefits associated to participation modes, the ability of the system to cope with conflict and the reactions of public opinion to challenges beyond electoral politics.

### **Electoral politics and protest**

Challenging established perspectives and doing so through disruptive and contentious repertoires implies the need to deal with public responses. In this sense, indirect influence of social movements on public perspectives is closely related to electoral politics and government responsiveness to contentious politics. The literature on movement outcomes have signalled the importance of direct connections between movements and parties (Goldstone 2003, Amenta 2006), as this implies the possibility for movements to get access into the electoral sphere through coalitions or electoral platforms (Schwartz 2000, Rucht 1999, Kriesi 2004), by direct electoral involvement or by influencing party positions (Goldstone 2003, Earl & Schussman 2004, Koopmans 2004, Meyer 2005) or through party support or joint action (Fetner 2008, Brown et al. 2011). However, electoral politics also needs to be considered when studying the indirect influence of contentious politics, as confrontation with official discourse may be a central matter in understanding potential effects on public opinion.

Electoral politics and protest are not mutually exclusive alternatives. Recent studies have found that support for contentious politics is not contradictory with sympathy towards parties (Heaney & Rojas 2011) or support for them as a result of cues obtained from contentious actions (Rucht 1990). Thus, the potential of protest politics to influence electoral decisions also depends on partisan strategies aimed at positioning themselves in response to expressions of discontent in multiple issues. Parties can accept social protest or try to avoid the questions altogether. To the extent that the actions of challengers are perceived as legitimate, it is likely that political elites respond to them and increase the prominence of the contended issues. Additionally, parties can take different positions on controversial issues in accordance with their expectations or may emphasize or avoid a particular dimension to appropriate the issues according to their convenience (Walgrave 2012).

Citizen campaigns, emerging citizen action groups and common interest causes are increasingly offering opportunities for involvement and a wide repertoire of action both online and offline. Informal, everyday politics also involves expressions of

dissatisfaction that highlight disagreement and citizen discomfort in opposition to government and representatives. These may be highlighting perceptions of closure in the political system in which formal channels for citizen involvement through political elites are considered effective ways for the exercise of sovereign citizenship. A central question for understanding government response to contentious politics is determining the extent to which citizens and political elites interact in social media.

### **Influence in social media**

Interactions between users are the heart of social media. The nature of Twitter, and most importantly of the use of Twitter as a space for contentious politics is determined by the amount and quality of interactions between users. The political use of social media can therefore be characterized by understanding how elites engage in public discussion directly, rather than through media references. Previous studies of political action in Twitter have found that public figures aim at promoting themselves and disseminating information about their perspectives and actions (Golbeck *et al.* 2010) and that direct communication between MPs and citizens is scarce (Kwak *et al.* 2010). Notwithstanding, if tweets are used for expressing views on current topics, and to discuss issues with fellow politicians (Sæbø 2011), elite responses to contentious politics are expected to be a relevant matter, even if they do not engage in discussion with citizens. This expectation needs to be qualified when considering that contentious politics is a hard environment for political discussion and government actors have incentives to retreat from the issues when they are directly questioned or blamed.

Notwithstanding, independently from the extent of elite involvement in issue networks, it is important to keep in mind that contentious issues are not a priority for a huge part of public opinion with little interest in politics and who are not directly involved or share the grievances in any of the issues. This implies that the minorities who follow the issue closely may become crucial into raising public attention towards the issues (Hutchings 2005) and influencing other's perspectives. Furthermore, these may be attractive to parties that are keen to hear their electorate and willing to take positions by responding directly to challengers.

If elite responses to contentious politics are marginal in the Twitter sphere as compared to the volume of public opinion reactions, it is important then to turn the attention to the potential influence of political elites. Research has established that factors such as the

level of controversy, the conditions that determine the prominence of citizen demands, and media cycles are relevant for explaining influence in the context of particular issues (Druckman 2004). These types of contextual conditions may vary in time and space, affecting public attitudes toward contentious politics with different effects. Considering news stories from multiple sources, has the potential to provide -on average- a balanced perspective of challengers of the system and their claims, as well as an objective account of their actions. In this sense, media attention is central for the formation and expression of public support for contentious politics in Twitter.

In sum, we intend to determine the extent to which public support for contentious politics in Twitter is related to elite responses and whether the potential influence of users and media attention may influence the expression of support.

## **Data**

### **< Data collection >**

Twitter is a relevant space for tracking government responses as it is a directed social network, where users have a set of subscribers known as followers. Users post messages short messages (tweets - maximum 140 characters) which are displayed on the user's profile page and streamed to followers. Direct messages to other users (by directing them to user handles @userid) and retweets -forward of tweets originally made by another user (marked by RT and author handle) - are the standard protocol for communication. Retweets are a means of endorsement and are generally used for propagating interesting posts and links through the Twitter community. We focus our analysis on retweets (N=1,659,000) as this guarantees that we capture the most reliable contents, considering that they have been validated (for topic relevance) and signalled as having contents that is worthy enough to endorse.

The development of organized activity through formal associations or movements emerging in many areas of the Internet 2.0 (web-sphere, social networks, micro-messaging, video-sphere) can be followed from the study of the most important issues in the public agenda (political conflict), by monitoring the affairs of social interest (environment, education, health, taxation, security, gender, occupation, principles and values, ...) or individual actors (social movements, parties, institutions governments, media leaders, ...) in order to document and analyse the dynamics and consequences of the use of the internet on society. The choice of the access point to information responds

to substantive questions, but the chances of getting a systemic view of networks of actors are unprecedented in research in the social sciences.

Our data is a convenience sample of Twitter messages that were filtered on issue-specific keywords and tags. The sample includes four issues and a diverse sample of events in a 40 month period, thus covering an important part of contentious politics in Spain. The sample covers issues of house evictions, Catalan/Spanish nationalism and the demand for real democracy by the *Indignados* between 2011 and 2013. These include massive public demonstrations of different types (ritualistic events, responses to public decisions, and performative events introducing a novel issue) as well more disruptive and unconventional concentrations focused on specific targets or using innovative repertoires (table 1).

**Table 1 - Cases**

Issues	Cases	Challenger	Demonstration date	Period under study
Catalan independence	<b>Diada 2012</b>	Support CI	September 11 <sup>th</sup> 2012	2012-09-04 2012-10-19
	<b>Diada 2013</b>	Support CI	September 11 <sup>th</sup> 2013	2013-09-04 2013-10-19
Spanish Nationalism	<b>Día de la hispanidad</b>	Support CI	October 12 <sup>th</sup> 2012	2012-09-04 2012-10-19
	<b>Día de la hispanidad</b>	Support CI	October 12 <sup>th</sup> 2013	2013-09-04 2013-10-19
Questioning democracy	<b>25S - Rodea el Congreso</b>	Indignados	September 25 <sup>th</sup> - 29 <sup>th</sup> 2012	2012-09-18 2012-10-06
	<b>15M</b>	Indignados	May 15 <sup>th</sup> to June 12 <sup>th</sup> 2011	2011-05-01 2011-12-01
	<b>12M15M</b>	Indignados	May 12 <sup>th</sup> , 2012	2013-05-05 2013-05-25
Housing rights	<b>Escrache</b>	PAH	March to October 2013	2013-02-01 2013-10-01

Social media users are not representative of the population and the fact that we follow the traces of followers of contentious politics brings additional biases from self-selection to issue-specific contents. Studies that characterize Twitter users in Spain<sup>3</sup> have found that they are younger and that they have above average education levels than the Spanish population. The percentage of men and women tends to equalize and

<sup>3</sup> Observatory of social networks 2012 - <https://observatorio.iti.upv.es/list/report/>



territorial distribution is concentrated in large towns and cities. This limits the ability to generalize the results for the entire Spanish population, but the substantive interest is studying attitude dynamics in issue publics and electoral elites. Furthermore, the prevalence of opinion leaders in social media and the issue-specific publics pose a valuable sample to follow those who are most concerned about public affairs and have strong positions, knowledge and interest for expressing them (Stimson 2004: 163).

The selection of the periods of study is based on the assumption that organizations use social for mobilization in order to raise issue attention within a short timeframe before the events. The ritual demonstrations (i.e. Catalan national celebration *Diada* and the day for Spanish identity *Día de la hispanidad*) are also expected by issue publics who are assumed to start discussing the upcoming events. However, in prediction studies of voting data from Twitter it is not clear what impact the study period has in predictions. The use of different time windows involves substantial variations (Jungherr et al., 2012) and therefore we emphasize the need to carefully identify and justify the reasons for possible variations.

Additionally to twitter data, we analysed media saliency for the 10 cases. We collected news from El País, El Mundo, La Vanguardia and El Periódico to obtain a representation of the Spanish polarized pluralist model<sup>4</sup> (Hallin & Mancini 2004). These sources represent distinct political tendencies and to take an advocacy role, mobilizing their readers to support different causes (Chaques-Bonafont & Baumgartner, 2013).

#### < Event description >

The first issue studied is Catalan nationalism, with four demonstrations that took place from 2010 to 2013<sup>5</sup>. Support for Catalan independence has increased from 12% in 2005 to 48.5% in 2013<sup>6</sup> in Catalonia, with the case of the *Catalan Diada* in 2013 being a remarkable milestone for its estimated turnout of 1.6 million people in Barcelona. These figures show an unprecedented and dramatic change in the constitutional preferences of individuals. They offer a unique case of analysis for studying the diffusion of attitudes,

---

<sup>4</sup> The Factiva database was used to collect news reporting on the ten cases. To identify the media content related to them, we used the search queries detailed on Table A3.2

<sup>5</sup> The “Autodeterminació es Democràcia” and “Som Una Nació, Nosaltres Decidim” events were excluded from some of the analysis as no data for user visibility is available.

<sup>6</sup> Source: CEO 3rd wave <http://goo.gl/aWMyU8>

towards the legitimacy of actors, their grievances and repertoires, on a long-standing position issue in which political disagreement is explicit between opposing stances.

Secondly, we considered the Spanish nationalism ritual demonstrations, which take place for the celebration of the “*Día de la hispanidad*” every 12<sup>th</sup> of October in major cities, but with greater relevance in Madrid and Barcelona. We considered the 2012 and 2013 events, whose estimated turnout grew 61% in a year. This signals the increasing polarization of the Spanish society with regards to the nationalist demands.

Thirdly, we included three demonstrations on the functioning of democracy. The first of them is the kick-off of the *Indignados* movement in Spain, which includes 50 simultaneous demonstrations all over Spain from the 15<sup>th</sup> of May to the 12<sup>th</sup> of June 2011. Those protests were promoted by ad-hoc platforms that operate mainly through online social media under the overall motto Real Democracy Now! More than 400 organizations were involved in those events, claiming for the reform of the Spanish political system and the adoption of measures for fostering transparency, accountability and participation. They aroused strong public interest among Spanish citizens, as 49% of the surveyed population reported to be very interested or interested in the 15M movements. Likewise 70% of individuals who were interested considered 15M grievances either positive or very positive<sup>7</sup>.

The *Indignados* took the streets one year later to celebrate the second anniversary of the movement on May 12<sup>th</sup> 2013 (which explains why the event is referred to as 12M15) with 20 simultaneous demonstrations in different Spanish cities. The third demonstration on the issue questioned austerity measures and claimed for the quality of democracy following on the Occupy Congress events in the US. A massive concentration surrounding the Spanish Congress took place in Madrid on September 25<sup>th</sup> 2012 with an estimated turnout of 6.000 participants. The events were contested by an unprecedented and controversial police intervention leading to additional concentrations on the 26<sup>th</sup> and a new major demonstration on September 29<sup>th</sup> with an estimated turnout of 6,000.

Finally, under the general denomination of *Escrache* we considered multiple events and demonstrations related to housing rights from February to October 2013 in Spain.

---

<sup>7</sup> National surveys from the Centro de Investigaciones Sociológicas (CIS)

*Escrache* is a repertoire adopted from the Argentinian struggle against dictatorship which in the Spanish case involved concentrations in front of government officials and MPs in order to pressure their decision on a popular legislation initiative to change the law on evictions for mortgage unpayments. These were mostly promoted by *Plataforma de Afectados por la Hipoteca* (hereon PAH), a civil association which has stopped 1.135 evictions so far and was highly supported by an impressive 78% of the surveyed population on April 2013<sup>8</sup>.

## Methods

### <Digital methods>

Digital research methods (Rogers 2004) are generating a unique opportunity to approach the development of social activity to the extent that they are based on actual data and processes which are specific to the actual interaction forms of the information society. The trace of digital activity is an unprecedented opportunity for observing the behaviour of civil society and governments in social processes. It is a way of doing research through non-invasive methods (non-reactive or unobtrusive research data), (Janetzko 2008), which is especially promising for the study of political attitudes as it avoids the measurement problems associated with social reactions in surveys and interviews.

### <Text mining>

In order to identify public attitudes in our database of retweets, we used dictionary coding techniques as to identify keywords and phrases in each tweet (Matthes & Kohring 2008). We classified tweets by identifying keywords that signal explicit and direct attitudes (opinionated tweets) as compared to tweets with no value charge. These non-opinionated tweets provide information related to the issues or events without taking a position or expressing an attitude. Protest-related tweets are intended to share information about the events (i.e. what is going on in the street, how is the police reacting, ...), or to broadcast calls to action and media accounts on the events (Theocharis *et al.* 2015). Endorsing news contents (by providing links to issue related contents) may be a form of expressing an attitude; however, we argue that opinionated tweets in which positions and compromises are explicit reveal more intense attitudes

---

<sup>8</sup> Data on prevented evictions form the PAH site – [www.afectadosporlahipoteca.com](http://www.afectadosporlahipoteca.com) and the support figures were reported by a Metroscopia survey for El País, April 11th 2013. <http://blogs.elpais.com/metroscopia/2013/04/el-78-de-los-espa%C3%B1oles-68-entre-los-votantes-del-pp-85-entre-los-del-psoe-se-muestra-de-acuerdo-con-la-campa%C3%B1a-de.html>

than providing references or data on the issue. Consequently, we strictly looked for textual interpretations and avoided attached images or references in order to avoid latent meaning or non-textual interpretations. To this end, we designed a coding process and a codebook (Appendix 4) with an inductive process of manual coding (two sub-samples of one thousand tweets for each event, containing a random selection of tweets and the top retweets). A coding procedure was defined (Figure A4.3) and a second group composed of two coders were trained. The second round of human coding classified the top retweets for the ten cases for a total of 3200 tweets. Inter-coder reliability for pairs of coders working on the similar datasets reached 87% agreement for contents polarity and 76% agreement when identifying attitude objects. From these initial process, keyword dictionaries were constructed for each event and a simple identification of substrings in strings protocols were used to code tweets.

The process was iterative with an initial test of the performance of dictionary coding as compared to human coded tweets. This produced matches above 66% for tweets containing a single keyword for each category of polarity. Scores for attitude objects and attitude types were under 60% figures. Special attention was devoted to those tweets that express irony or reversed meaning as this has been established as one of the main challenges in text mining Twitter contents (Maynard & Funk 2012). We only considered tweets that clearly word this figure of speech to avoid errors in the creation of dictionaries.

#### <Influence>

In order to study influence we consider not only the potential of users for capturing attention in particular structures of Twitter networks, but also the dynamics of message exchanges. Having high levels of visibility in Twitter is substantially different than being central on issue networks. Being highly visible implies the potential to reach a broad audience while being central on the issue-specific conversation reflects the potential for capturing the attention of issue publics (individuals who tweet the most about the issue) (González-Bailón *et al.* 2013). The implications for both roles are central to understand party responses, as highly visible tweeters will probably reach a large audience, but central tweeters may have a higher influence in forming or changing the attitudes of those who interact with them as they will have a high chance to be recognized as issue-experts.

We delve into the elite’s role in the response to contentious politics by looking at the relative role of actors within the conversations and based on their Twitter use. We adopt the model proposed by González-Bailón, Borge-Holthoefer, & Moreno (2013) which is a four-fold category resulting from the measurement of potential influence – ratio of users following a particular actor as compared to the number of followers, and a measurement of centrality – the ratio of sent tweets compared to the ones received (mentions, replies and retweets). These types provide an indicator of the distribution of followers in the allocation of targeted messages (figure 1).

**Figure 1 – Potential influence roles in Twitter <sup>9</sup>**

<b>Received messages / Sent messages</b>	Influentials	Hidden influentials
	Broadcasters	Common users
	<b>Following / Followers</b>	

Influentials are the most visible users as they act as hubs that are followed by many and receive the most attention (i.e. celebrities). Hidden influentials have below average values for centrality, but they receive a high volume of messages. They are likely to start long cascades of information (2013:57) and activate diffusion processes even though they are not the most visible in issue-specific networks. Broadcasters are relevant as they are the most visible users in the stream of information flow. They have large numbers of followers and thus the potential to influence a larger number of users. However they are not recognized as important issue-related actors and therefore do not receive issue-specific messages. Common users receive low levels of attention and have the lowest influence potential. This characterization provides a straightforward account of influence potential by simplifying centrality and visibility attributes into categorical measures.

---

<sup>9</sup> Adapted from González-Bailón *et al.* 2013 - Distribution of users according to network position and message activity

## Measures and results

We operationalized support for contentious politics as the expression of positive attitudes as compared to negative attitudes. This implies focusing exclusively on opinionated tweets. Table 2 shows the distribution of positive and negative attitudes in opinionated and non-opinionated tweets by case. Non-opinionated tweets account for almost 75% of our sample<sup>10</sup> and there are wide differences between positive and negative attitudes between cases. Additionally, almost 40% of opinionated tweets in the studied sample are expressions of attitudes toward objects different than challengers, grievances or repertoires. A big part of attitude expression during contentious events is directed at defenders of the statu-quo or to police action. As our interest is to focus on responses to contestation, we kept the subsample of opinionated tweets directed at challengers, grievances our repertoires (N=420,470).

**Table 2 – Distribution of positive and negative attitudes in opinionated retweets by attitude object**

Case	Negative						Positive						Total
	Challenger		Repertoire		Grievance		Challenger		Repertoire		Grievance		
	%	N	%	N	%	N	%	N	%	N	%	N	
<b>12M15M</b>	28	808	28	799	1	35	29	825	12	353	1	25	2,845
<b>12O 2012</b>	5	248	14	651	6	279	5	215	6	271	64	2,974	4,638
<b>12O 2013</b>	7	189	73	2,041	0	7	3	86	9	239	8	234	2,796
<b>15M</b>	17	4,569	9	2,429	12	3,217	37	10,060	10	2,604	16	4,275	27,154
<b>25S</b>	1	809	28	17,969	13	8,272	1	924	39	25,440	18	11,785	65,199
<b>Diada 2012</b>	6	6,504	68	74,674	15	16,947	0	513	9	9,849	1	1,276	109,763
<b>Diada 2013</b>	6	4,345	54	37,765	16	10,820	5	3,560	14	9,534	5	3,518	69,542
<b>Escrache</b>	0	316	99	137,161	1	963	0	1	0	0	0	8	138,449
<b>Total</b>	4	17,788	65	273,489	10	40,540	4	16,184	11	48,290	6	24,095	420,386

The second part of our analysis considers the extent in which political elites express support for contentious politics on Twitter. We find a marginal involvement of political elites as their posts account for less than eight percent of opinionated tweets. Nevertheless, the raw number of posts containing attitudes toward contentious politics does not indicate the potential influence of political elites in the aggregate results for public legitimation. Studies on the phenomenon of minority interest have established significant differences between the content generated by more visible users who have greater degrees of activity and the silent minority who have few resources to capture

<sup>10</sup> Further analysis needs to be done for identifying false negatives.

attention on Twitter (Mustafaraj *et al.* 2011). The type of user regarding their relative potential for capturing attention will therefore determine differences in political responses between cases and attitude objects. Table 3 depicts the relative level of influence of political elites.

Darker shades indicate higher support of political elites. This can be taken to represent responsiveness levels if we assume that the number of posts is a good proxy for engagement with public discussion on the issue. There is a wide variation on public responses between cases and issues as expected. The most active political elites are highly visible as they fall into the categories of influentials and hidden influentials especially in the *Dia de la Hispanidad* in 2012. Not surprisingly, the highest proportion of negative attitudes by political elites took place in the *escrache* cases. Elites replied to direct action toward government actors and energetically reacted to a novel repertoire questioning its legal bases and the alleged threat it represented for the challenged actors.

**Table 3 – Potential influence of political elites on support for contentious politics**

	Non-elite				Political elite			
	Influential	Hidden influential	Broadcaster	Common user	Influential	Hidden influential	Broadcaster	Common user
<b>12M15M</b>	34%	33%	39%	35%	86%	88%	73%	79%
<b>12O12</b>	68%	74%	76%	78%	78%	78%	81%	88%
<b>12O13</b>	12%	10%	29%	26%	45%	37%	28%	17%
<b>15M</b>	67%	61%	68%	68%	53%	34%	43%	32%
<b>25S</b>	60%	58%	60%	62%	47%	44%	54%	57%
<b>Diada 2012</b>	8%	8%	13%	14%	5%	6%	10%	10%
<b>Diada 2013</b>	28%	20%	23%	23%	33%	44%	17%	17%
<b>Escrache</b>	0%	0%	0%	0%	0%	0%	0%	0%



The differences in potential influence can also be explored between partisan differences in political elites. We are interested in comparing the two big parties in Spain, the conservative *Partido Popular* and the Socialist *PSOE*, with smaller parties with parliamentary representation in national and sub-national level and extra-parliamentary

parties<sup>11</sup>. This approach is useful for considering party prominence and closeness to contentious politics.

**Table 4 – Party involvement in Twitter issue networks (Column percentages)**

		PP	PSOE	Parliamentary	Extra-parliamentary	Unidentified	Total
<b>12M15M</b>	%	0.4%	0.9%	0.8%	0.0%	0.0%	0.5%
	N	30	58	360	9	0	457
<b>12O12</b>	%	0.5%	1.0%	0.8%	0.0%	0.9%	0.5%
	N	37	64	357	3	2	463
<b>12O13</b>	%	1.0%	0.1%	0.4%	0.0%	0.4%	0.3%
	N	71	4	174	0	1	250
<b>15M</b>	%	18.9%	40.3%	59.5%	97.4%	0.0%	66.7%
	N	1398	2503	27154	27154	0	58209
<b>25S</b>	%	20.5%	14.0%	10.7%	1.7%	3.1%	8.8%
	N	1522	873	4857	462	7	7721
<b>Diada 2012</b>	%	14.5%	14.7%	8.1%	0.5%	34.1%	6.7%
	N	1076	912	3686	131	76	5881
<b>Diada 2013</b>	%	6.8%	5.4%	10.4%	1.3%	51.6%	6.9%
	N	506	335	4744	350	115	6050
<b>Escrache</b>	%	37.4%	23.6%	9.3%	0.4%	9.9%	9.9%
	N	2767	1465	4239	113	22	8606
<b>Total</b>		7407	6217	45600	27872	223	87319

The results show a large variation in elite responses between cases (Table 4). The most elite-challenging events, *Escrache*, 25S and the 15M have the higher levels of party involvement. This pattern reveals that elites have strong reactions to direct challenges and to threatening repertoires such as the concentrations around the parliament, considering its symbolic value. The results for the 15M case are harder to interpret as the event is by definition a direct challenge to elites. Extra-parliamentary parties publicly supported the *Indignados* and expressed their sympathy for the encampments. The high levels of involvement signal their intentions to profit to some extent from their grievances against major parties.

Ritual events on the Catalan/Spanish nationalism (i.e. *Catalan Diada* and *Dia de la Hispanidad*) are prone for parties expressing their positions and emphasizing the clear division on the nationalist cleavage, thus supporting demonstrations on their side.

<sup>11</sup> Parties in each category are listed in Appendix 2 on the measures section



The exploratory approach in this paper leaves out the temporal dimension of Twitter data. However we compare the volume of tweets with media accounts of protest events in order to control for media attention for each of the cases. Figure A1.1 in Appendix 1 represents the longitudinal dimension in order to trace the change of public responses over time. All of the cases have similar tweet volume patterns with peaks near the days of the central events. A wide variety between cases and attitude objects is interesting regarding the potential to explore the sources of public legitimation of contentious politics using the temporal dimension.

#### <Multivariate analysis>

In order to analyse the combined effect of elite responses, potential influence and partisanship, we propose a model that explains public support for contentious politics considering the potential factors that have been presented individually. Table 5 presents the marginal effects for explaining positive attitudes as compared to negative attitudes. The first specification of the model includes attitude objects, influence, media attention and fixed effects for the events in order to explore differences between cases.

We find that repertoires and grievances receive significantly less support than actors, as they are negatively and significantly related with positive attitudes. This is relevant to sustain our expectation for differences in attitudes between support for procedural and substantive dimensions of contentious politics. Media attention to protest politics has no significant effects on support. The results also show that influential users, those with above average levels of visibility in Twitter and centrality in issue networks, turn out to support contentious politics less than common users. However, hidden influential and broadcasters show slightly more support for contentious politics than common users. We find as well that our expectation for media effects on attitudes towards protest is not substantiated as there is no significant effect for media attention. The first model also reveals that the *Escrache* case has the least support when compared with all the other cases.

Considering that our main interest lies in understanding elite responses, we propose a second model which includes a dummy indicating the support levels of political elites as compared to non-elites. On average, elites tend to express less support to contentious politics than non-elites and the differences between actors, grievances and repertoires change only very slightly when considering elite responses.

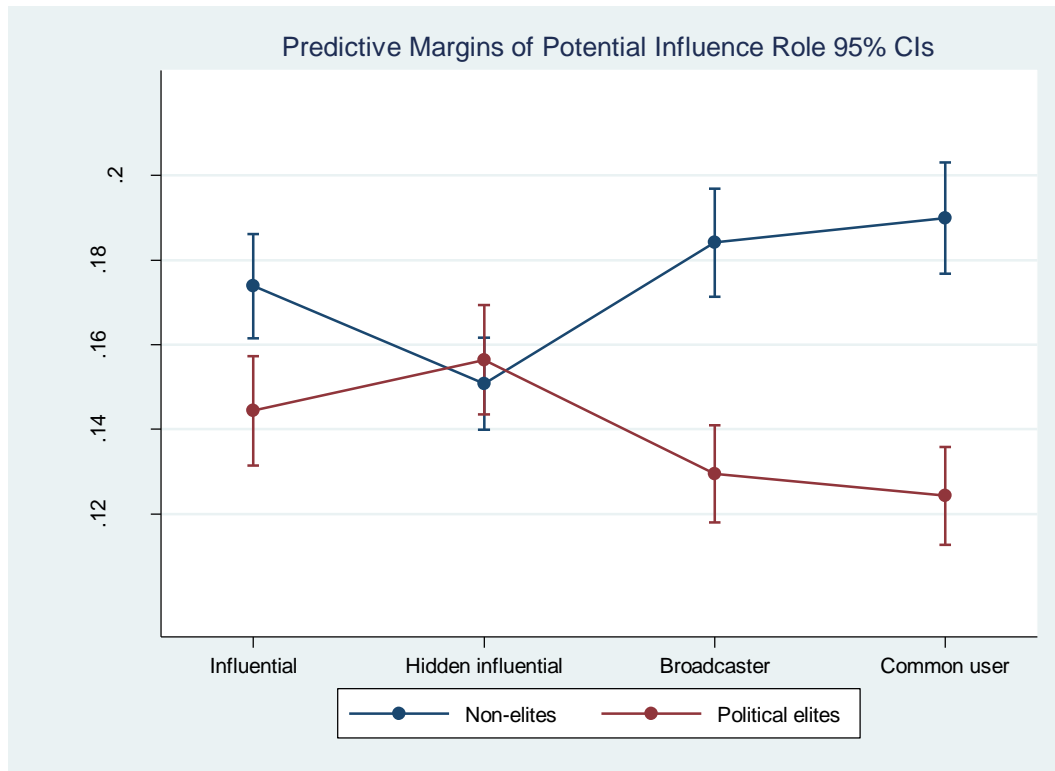
**Table 5 – Marginal effects on support of contentious politics (Logistic regression 1=Positive attitudes 0=Negative attitudes)**

	Potential influence		Potential influence + Political elites		Potential influence + Parties	
	dy/dx	SE	dy/dx	SE	dy/dx	SE
<b>Attitude object (Reference – Challenger)</b>						
Repertoire	-0.066***	(0.002)	-0.067***	(0.002)	-0.059***	(0.002)
Grievance	-0.057***	(0.002)	-0.056***	(0.002)	-0.045***	(0.002)
<b>Potential influence (Reference - Common user)</b>						
Influentials	-0.016***	(0.001)	-0.016***	(0.001)	-0.015***	(0.001)
Hidden influentials	0.006***	(0.001)	0.006***	(0.001)	0.007***	(0.001)
Broadcasters	0.009***	(0.002)	0.009***	(0.002)	0.011***	(0.002)
<b>Tweets by political elites (Reference - tweets by non-elites)</b>						
Tweets by PE			-0.028***	(0.002)		
<b>Tweets by political elites by party (Reference - tweets by non-elites)</b>						
PP					-0.020***	(0.004)
PSOE					-0.172***	(0.005)
Parliamentary					-0.007**	(0.002)
Extra-parliamentary					0.089***	(0.008)
Unclassified					-0.128***	(0.03)
Media attention	0	(0)	0	(0)	0.000***	(0)
<b>Case dummies (Base – Escrache)</b>						
12M15M	0.362***	(0.009)	0.367***	(0.009)	0.387***	(0.009)
12O12	0.736***	(0.007)	0.736***	(0.007)	0.741***	(0.007)
12O13	0.200***	(0.008)	0.200***	(0.008)	0.210***	(0.008)
15M	0.559***	(0.004)	0.560***	(0.004)	0.418***	(0.017)
25S	0.590***	(0.002)	0.593***	(0.002)	0.599***	(0.002)
Diada 2012	0.107***	(0.001)	0.106***	(0.001)	0.112***	(0.001)
Diada 2013	0.234***	(0.002)	0.234***	(0.002)	0.241***	(0.002)
Observations		419,686		419,686		419,686
Pseudo R-squared		0.341		0.341		0.346

Standard errors in parentheses \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

The effect of influence roles does not change when considering elites. However, as we are interested in understanding the potential influence of elites and non-elites, we introduce a variation of the second model in order to interact elite responses with potential influence roles (Not shown in table 4). Figure 2 shows these differences.

**Figure 2 – Differences in predictive margins of potential influence by political elites and non-elites**



These results provide further understanding on the role of political elite’s responses as compared to regular tweeters. Differences between elites and non-elites are not significant for hidden influentials. This means that the most important issue publics on Twitter -those highly recognized for their issue involvement- have similar attitudes toward contentious politics disregarding their being political elites or not. For the other three roles of potential influence differences between elites and non-elites are statistically significant with political elites supporting to a less extent contentious politics than non-elites. The fact that distances between influential elites and non-elites are smaller than distances between broadcasters or common users, may be interpreted as cautious responses by the most prominent elites. We explore further these differences between attributes of elites by looking into parties and party prominence.

The third model in table 5 includes parties as compared to users with no party affiliation. The most important result is that the only parties that support contentious politics more than non-elites are the extra-parliamentary parties. This signals the closeness of extra-parliamentary parties to contentious politics, but it can also speak about the importance of protest politics for providing access into the political arena. We also find that the lowest level of support for contentious politics comes the socialist

party's users and from tweeters which have been identified as political elites but have no party affiliation<sup>12</sup>. This result is counterintuitive as socialists have traditionally relied on street demonstrations for supporting their positions on labour rights and have mobilized left libertarian causes related to civic rights. Furthermore, the conservative PP has been the most challenged party both in the Catalan nationalist cleavage and on account of its responses to the economic and political crises as the incumbent since November 2011.

In the last model we find a small but significant effect of media attention on attitudes towards protest which could be signalling the relevance of partisan responses on media accounts or the effects of media when partisan differences are considered. Further research into media ideological affiliation and the contents of news stories on the issues will deepen our understanding on possible combined effects of party responses and media accounts on support for contentious politics.

## **Discussion**

The central claim of this paper is that responses from political elites to contentious politics are relevant in shaping attitudes towards contentious politics. The results obtained provide valuable evidence on the role of political elites for explaining support for contentious politics. Although the response of political elites to contentious politics in Twitter accounts for 8 percent of the sampled users, elite users have important influential roles as they are more visible in average and more central than regular users in Twitter interactions for some cases (*escrache*, *Catalan Diada* and 12O in 2013). Political elites support protest less than regular users in Twitter. This has relevant implications as political elites may be acting as gatekeepers who fend off challengers and new repertoires of political action. However, there are important differences between elite users as we find differences between the two major parties, smaller parties in the opposition and in local governments, and extra parliamentary parties. These smaller parties play a brokerage role between electoral and contentious politics as they express significantly more positive attitudes than non-elites.

The results shed some light on attitudes toward contentious politics and the role of political elites, but further analysis into the details of elite positions and the temporal

---

<sup>12</sup> These cases come from lists of political elites provided by the media – classification into parties is straightforward as they are not recognized by parties.

dimensions of responses is needed in order to provide substantive conclusions about the actual effect of elite responses. Furthermore, we find very small differences regarding media accounts of protest but important within issue variations that point to the relevance of the issue context in time. Further analysis of comparable attributes between cases, differences between media sources and the position of media accounts of contentious politics, and time series analysis of tweets and media attention, will enrich our analyses and provide more nuanced insights on support towards contentious politics.

#### <Significance of the findings (research contribution)>

The main contribution of this research is to provide new evidence to study support for contentious politics with rich data from social media. Tracing public expressions on social media provides a great opportunity to deal with vast amounts of data and to identify multiple dimensions of support and influence dynamics. However, social media data also brings important challenges and shortcomings.

#### <Limitations of the current study (research)>

The most important qualification to our research approach is the limitation imposed by coding decisions. Aiming at the analysis of large volumes of tweets makes the coding process more prone to errors which escape random supervision. This implies sacrificing reliability in order to have a richer account of contentious politics through the study of Twitter (Hopkins & King 2010).

## References

- Amenta, E., Caren, N., Chiarello, E., & Su, Y. (2010). The political consequences of social movements. *Annual Review of Sociology*, 36, 287-307.
- Barnes, S. H. & Kaase, M. (1979) *Political Action: Mass Participation in five Western Democracies*, Sage: Beverly Hills.
- Chaque-Bonafont, L., & Baumgartner, F. R. (2013). Newspaper attention and policy activities in Spain. *Journal of Public Policy*, 33(1), 65–88. doi:10.1017/S0143814X12000219
- Druckman, J. N. (2005). Media matter: How newspapers and television news cover campaigns and influence voters. *Political Communication*, 22(4), 463-481.
- Earl, J., & Schussman, A. (2004). Cease and desist: Repression, strategic voting and the 2000 US presidential election. *Mobilization: An International Quarterly*, 9(2), 181-202.
- Fetner, T. (2008). *How the religious right shaped lesbian and gay activism* (Vol. 31). U of Minnesota Press.
- Fowler, J. (2005). Turnout in a small world. in *The Social Logic of Politics: Personal Networks as Contexts for Political Behavior* (ed. Zuckerman, A.) Temple University Press, Philadelphia, 269-287.
- Gamson, W. A. (1990). *The strategy of social protest*. Homewood, IL: Dorsey.
- Gamson, W.A. 1992. 'The Social Psychology of Collective Action,' Pp. 53-76 in: *Frontiers in Social Movement Theory*, edited by A.D. Morris and C.M. Mueller. New Haven, CT: Yale University Press.
- Golbeck, J., Grimes, J. M., & Rogers, A. (2010). Twitter use by the US Congress. *Journal of the American Society for Information Science and Technology*, 61(8), 1612-1621.
- Goldstone, J. A. (Ed.). (2003). *States, parties, and social movements*. Cambridge University Press.
- González-bailón, S., Borge-holthoefer, J., & Moreno, Y. (1865). Broadcasters and Hidden Influentials in Online Protest Diffusion, 44(0).
- Hallin, D. C., & Mancini, P. (2004). *Comparing media systems: Three models of media and politics*. Cambridge University Press.
- Heaney, M. T., & Rojas, F. (2011). The Partisan Dynamics of Contention: Demobilization of the Antiwar Movement in the United States, 2007-2009. *Mobilization: An International Quarterly*, 16(1), 45-64.
- Hopkins, D. J., & King, G. (2010). A Method of Automated Nonparametric Content Analysis for Social Science. *American Journal of Political Science*, 54(1), 229–247. doi:10.1111/j.1540-5907.2009.00428.x
- Hutchings, K. (2005). *Global civil Society: thinking politics and progress* (pp. 130-148). Routledge.

- Klandermans, B., & Oegema, D. (1987). Potentials, networks, motivations, and barriers: Steps towards participation in social movements. *American sociological review*, 519-531.
- Koopmans, Ruud. (2004). "Movements and Media : Selection Processes and." *Theory and Society*: 367–91.
- Kriesi, H. (2004). Political context and opportunity. *The Blackwell companion to social movements*, 67-90.
- Kriner, D., & Schwartz, L. (2009). Partisan dynamics and the volatility of presidential approval. *British Journal of Political Science*, 39(3), 609-631.
- Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a social network or a news media?. In *Proceedings of the 19th international conference on World wide web* (pp. 591-600). ACM.
- Matthes, J., & Kohring, M. (2008). The Content Analysis of Media Frames: Toward Improving Reliability and Validity. *Journal of Communication*, 58(2), 258–279.  
doi:10.1111/j.1460-2466.2008.00384.x
- Maynard, D. & Funk, A. (2012). Automatic detection of political opinions in tweets. In *The Semantic Web: ESWC 2011 Workshops* (pp. 88-99). Springer Berlin Heidelberg.
- Meyer, D. S. & Corrigan-Brown, C. (2005) Coalitions and political context: US movements against wars in Iraq. *Mobilization: An International Quarterly* 10.3: 327-344.
- Olsen, ME. (1968). "Perceived Legitimacy of Social Protest Actions." *Social Problems* 15(3): 297–310. <http://www.jstor.org/stable/10.2307/799786> (December 10, 2013).
- Robinson, John. (1970). "Public Reaction to Political Protest: Chicago 1968." *The Public Opinion Quarterly* 34(1): 1–9. <http://www.jstor.org/stable/2747878>.
- Rochon, T. R., & Mazmanian, D. A. (1993). Social movements and the policy process. *The Annals of the American Academy of Political and Social Science*, 75-87.
- Rucht, D. (1999). The transnationalization of social movements: Trends, causes, problems. *Social movements in a globalizing world*, 206-222.
- Sæbø, Ø. (2011). Understanding twitter™ use among parliament representatives: A genre analysis. In *Electronic participation* (pp. 1-12). Springer Berlin Heidelberg.
- Schwartz, S. H., & Sagie, G. (2000). Value consensus and importance a cross-national study. *Journal of cross-cultural psychology*, 31(4), 465-497.
- Snow, D., E. Rochford, S. Worden & R. Benford (1986). Frame Alignment Processes, Micromobilization, and Movement Participation, *American Sociological Review*. 51:4 pp. 464-481.
- Stokes, D. E. (1963). Spatial models of party competition. *The American Political Science Review*, 368-377.

- Theocharis, Yannis, Lowe, Will, van Deth, Jan & Garcia-Albacete, Gema (2015) Using Twitter to mobilize protest action: Online mobilization patterns and action repertoires in the Occupy Wall Street, Indignados and Aganaktismenoi movements. *Information, Communication & Society*, 18 (2): 202-220.
- Thomas, Nelson E. (2012) "Framing Effects on Values , Emotions , and Attitudes." 22–24.
- Turner, Ralph H. 1969. "The Public Perception of Protest." *American Sociological Review* 34(6): 815–31.
- Van Aelst, P., & Walgrave, S. (2001). Who is that (wo) man in the street? From the normalisation of protest to the normalisation of the protester. *European Journal of Political Research*, 39(4), 461-486.
- Walgrave, S., Lefevere, J., & Tresch, A. (2012). The associative dimension of issue ownership. *Public opinion quarterly*, 76(4), 771-782.

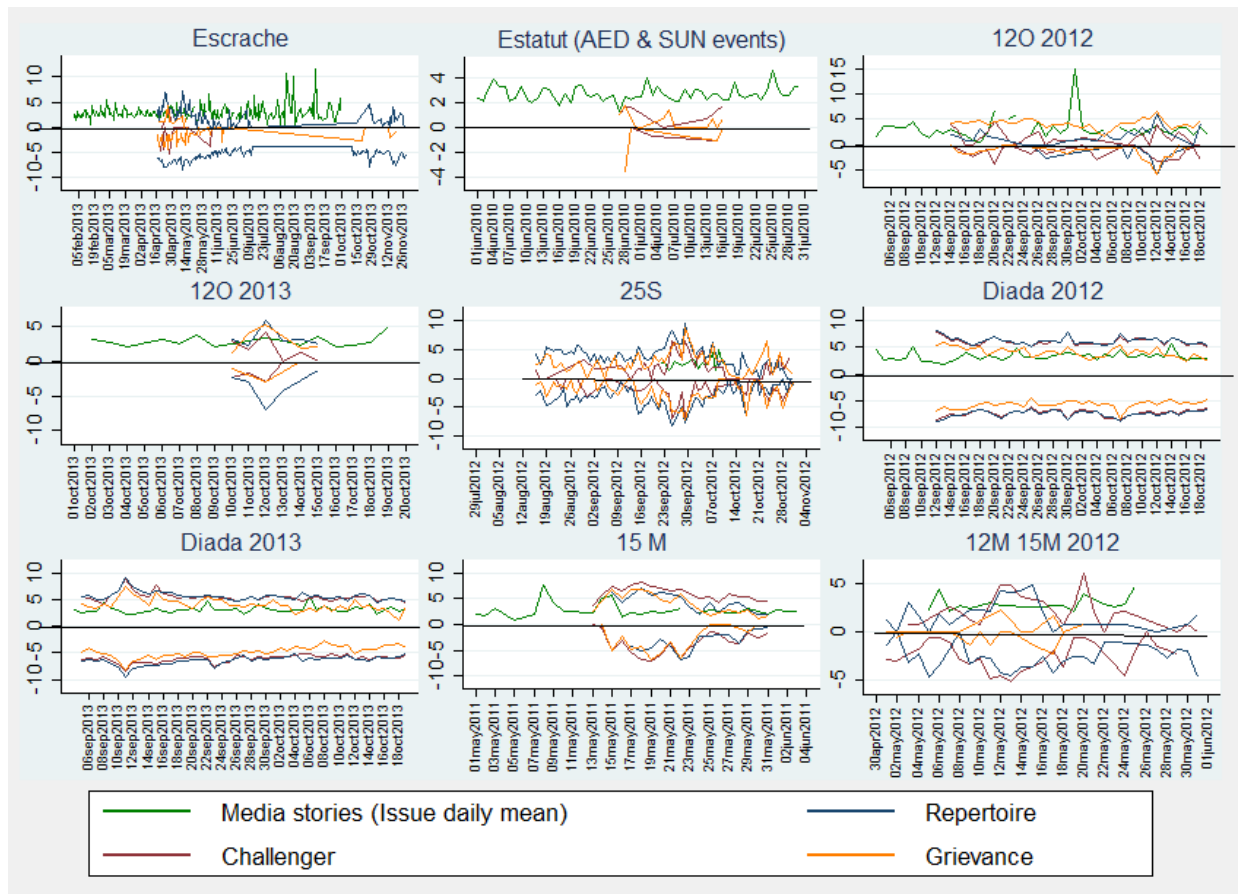


## Appendix 1 – Additional results

*Table A1.1- Distribution of positive and negative attitudes in opinionated and non-opinionated retweets*

	Opinionated retweets				Non-Opinionated retweets		Total
	Negative attitudes		Positive attitudes				
12M15M	2.8%	1,642	2.1%	1,203	95.1%	55,057	57,902
12O12	7.0%	1,178	20.4%	3,460	72.6%	12,295	16,933
12O13	18.3%	2,237	4.6%	559	77.1%	9,420	12,216
15M	4.3%	10,215	7.2%	16,939	88.5%	209,261	236,415
25S	3.5%	27,050	5.0%	38,149	91.5%	69,9,557	764,756
Diada 2012	39.9%	98,125	4.7%	11,638	55.4%	136,127	245,890
Diada 2013	30.8%	52,930	9.7%	16,612	59.5%	102,182	171,724
Escrache	92.1%	137,477	0.7%	972	7.3%	10,890	149,339
<b>Total</b>	<b>19.9%</b>	<b>330,854</b>	<b>5.4%</b>	<b>89,532</b>	<b>74.7%</b>	<b>1,238,667</b>	<b>1,659,053</b>

*Figure A1.1 – Retweet volume and media attention over time*



Positive values indicate positive attitudes and negative values negative attitudes

Media attention is tracked with an indicator of total number of stories per day for the four dailies considered (rescaled to fit in the graph #stories per day/200)

## Appendix 2 – Measures

### Opinionated tweets

1. Tweets in which attitudes are expressed
0. No attitudes are expressed – these tweets are most commonly intended for mobilization or informative purposes.

### Political elite

1. Twitter user classified into a list of party users in Twitter. Lists are composed by parties or media actors. They include members of the party, party associations (youth, local, campaign oriented, ...).
0. All other users not in a party list

### Positive attitudes

1. Tweets that contain at least one positive attitude
0. Tweets that contain at least one negative attitude

**Attitude object** – Tweets that explicitly mention challengers, repertoires or grievances in the text of the tweet.

1. Challenger
2. Repertoire
3. Grievance

**Potential influence** - four categories proposed by Gonzalez-Bailón et al. by comparing visibility in Twitter and centrality in the issue network. We also

1. Influential
2. Hidden influential
3. Broadcaster
4. Common user

**Party tweeters** – Twitter users who are affiliated or considered by the party to represent them in some way as to be included as part of their party lists. User coding was performed on a list of 1145 users classified into 28 parties<sup>13</sup>. These were finally classified in 5 categories:

1. PP
2. PSOE
3. Parliamentary representation (in local or national government in the period of study) – IU, EQUO, UPyD, ICV, CIU, ERC, CCN, Ciutadans, SI, AMAIUR, EHBildu
4. Extra parliamentary – FrenteCivico, AltDsdAbajo, PConstituent, PDI, Partido\_X, RadarPartido, enredmad, Confluyentes, ARCO, PACMA, EAJ, PartidoPirata, P-LIB, Compromis, Reagrupament
5. Unclassified
6. Noparty

**Media attention** – average number of news stories per day dealing with the issue or the protest events on the 4 sources considered for the analysis. The selection of articles is based on the same queries and periods used for extracting tweets as presented in Table A3.2.

---

<sup>13</sup> Some of these are groups of citizens that are not officially parties, but that are recognized as such or have become parties later on (i.e. Partido\_X, Proces Constituent, ...).

### **Appendix 3 – Twitter data**

Our dataset consists of over 5 million tweets accessed by querying the Twitter’s streaming Twitter Application Programming Interface (API) for the T-Hoarder project by Mariluz Congosto, except for data on the AED, SUN, Diada 2012 and October 12<sup>th</sup> 2012 events, for which we purchased data from GNIP, a reseller of Twitters historical archive (Table A2.1). The API provided a small fraction of the total volume of Tweets –50 tweets per second- at the given time for each event. This is estimated to represent 1 of all tweets.

Along with the text, the structure of each tweet returned by Twitter API includes metainformation with an individual ID, the timestamp and user status which includes his or her number of followers and followings, tweets released and localization among other data.

**Table A 3.1 – Cases, number of tweets and media salience**

<b>Issue</b>	<b>Event</b>	<b>Prominent Mobilization agents</b>	<b>Turnout/events</b>	<b>Period of study</b>	<b>Date of the event</b>	<b># News</b>	<b># Tweets</b>	<b># Retweets</b>
<b>Catalan nationalism</b>	Autodeterminació es Democràcia	PDD	5.000 (Police estimate)	01/06/2010-30/07/2010	12th June 2012	1,625	7,563	8,320
	Som Una Nació, Nosaltres Decidim	Ominum Cultural	1.100.000 (Police estimate)		10th July 2010			
	Diada 2012	Assemblea Nacional Catalana	1'500.000 (Police estimate)	04/09/2012-19/10/2012	11th September 2012	1,033	289,286	323,193
	Diada 2013	Assemblea Nacional Catalana	1'600.000 (Catalan Government estimate)	04/09/2013-19/10/2013	11th September 2013	913	183,264	243,927
<b>Spanish nationalism</b>	Día de la hispanidad	Plataforma de España y catalanes	6.000 (local Police estimate) 65.000 Spanish Government estimate)	04/09/2012-19/10/2012	12th October 2012	141	131,368	119,315
	Día de la hispanidad	Som Catalunya, Somos España	30.000 (local Police estimate) 105.000 Spanish Government estimate)	04/09/2013-19/10/2013	12th October 2013	133	23,473	77,826
<b>Functioning of democracy</b>	Rodea el Congreso	Coordinadora 25S	6.000 (Spanish Government estimate)	18/09/2012-06/10/2012	25 -29th September 2012	143	393,151	100,7492
	15M	Democracia Real Ya	50 simultaneous demonstrations took place all over Spain. Madrid demonstration 20.000 (Police estimate)	01/05/2011-01/12/2011	15th May to 12th June 2011	4,528	683,704	123,5471
	12M15M	Democracia Real Ya	20 simultaneous demonstrations took place in Spanish cities.	05/05/2012-25/05/2012	12th May 2013	417	219,035	319,655
<b>Right to housing</b>	Escrache	Plataforma de Afectados por las Hipotecas	30+ concentrations that took place in multiple Spanish cities	01/02/2013-01/10/2013	March to October 2013	1,767	303,193	169,943
<b>Total</b>						<b>10,700</b>	<b>2,234,037</b>	<b>3,505,142</b>

**Table A3.2 – Queries, keywords and collection periods**

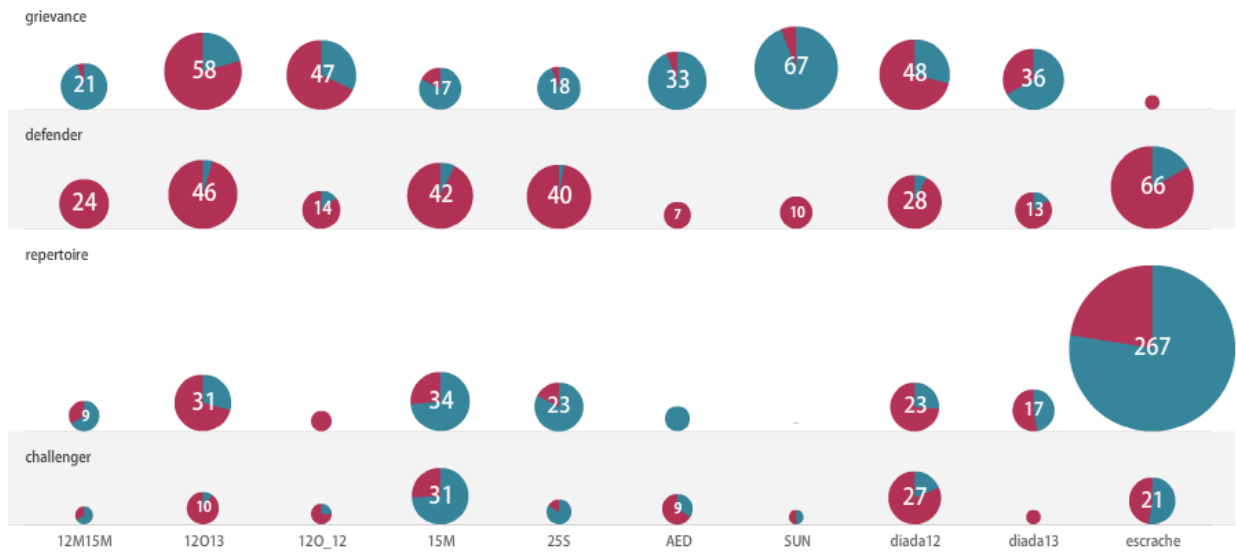
Issues	Event	Period of study	Queries
Catalan nationalism	Autodeterminació es Democràcia	01/06/2010-30/07/2010	(Sentencia" AND Tribunal Constitucional) OR (estatut OR estatuto AND (catalan OR catalunya OR cataluña)) OR "10-J" OR "10J" OR "Autodeterminació és democràcia" OR "som una nació nosaltres decidim"
	Som Una Nació, Nosaltres Decidim		
	Diada 2012	04/09/2012-19/10/2012	"via catalana" OR diada OR (independencia AND Cataluña) OR (manifestación AND (independencia OR autodeterminación)) OR "cadena humana" OR "proceso soberanista" OR "11S"
	Diada 2013	04/09/2013-19/10/2013	
Spanish nationalism	Día de la hispanidad	04/09/2012-19/10/2012	"dia de la hispanidad" OR (manifestación AND "nación española") OR "12 de octubre" OR "Fiesta Nacional"
	Día de la hispanidad	04/09/2013-19/10/2013	
Functioning of democracy	Rodea el Congreso	18/09/2012-06/10/2012	25S OR "rodea el congreso" OR "lo llaman democracia y no lo es"
	15M	01/05/2011-01/12/2011	15M OR Indignados OR acampadas OR "El 15-M" OR "Democracia real ya" OR "15-M" OR "Movimiento 15-M"
	12M15M	05/05/2013-25/05/2013	15M OR Indignados OR acampadas OR "El 15-M" OR "Democracia real ya" OR "15-M" OR "Movimiento 15-M" OR (manifestacion AND("segundo aniversario" AND "15M")) OR (manifestacion AND("primer aniversario" AND "15M")) OR "Paremos el genocidio financiero, juntos podemos" OR "Més indignats que mai" OR "de la indignación a la rebelión" OR "Escrache al sistema"
Right to housing	Escrache	01/02/2013-01/10/2013	escrache OR PAH OR (ILP AND hipoteca) OR desahucios OR "Stop desahucios" OR "Obra social la PAH"

## Appendix 4 – Coding

**Table A4.1 – Coding scheme**

14 categories were defined based on the combination of the following codes
<p>Attitude polarity</p> <ol style="list-style-type: none"> <li>1. Positive</li> <li>2. Negative</li> </ol> <p>Attitude object</p> <ol style="list-style-type: none"> <li>1. Challenger</li> <li>2. Repertoire</li> <li>3. Grievance</li> <li>4. Defender</li> </ol> <p>Reversed meaning</p> <p>Attitude type</p> <ol style="list-style-type: none"> <li>1. Delegitimation</li> <li>2. Support</li> <li>3. Legal</li> <li>4. Moral</li> <li>5. Unclassified</li> </ol>

**Figure A4.1 – Opinionated tweets identified by human coding**

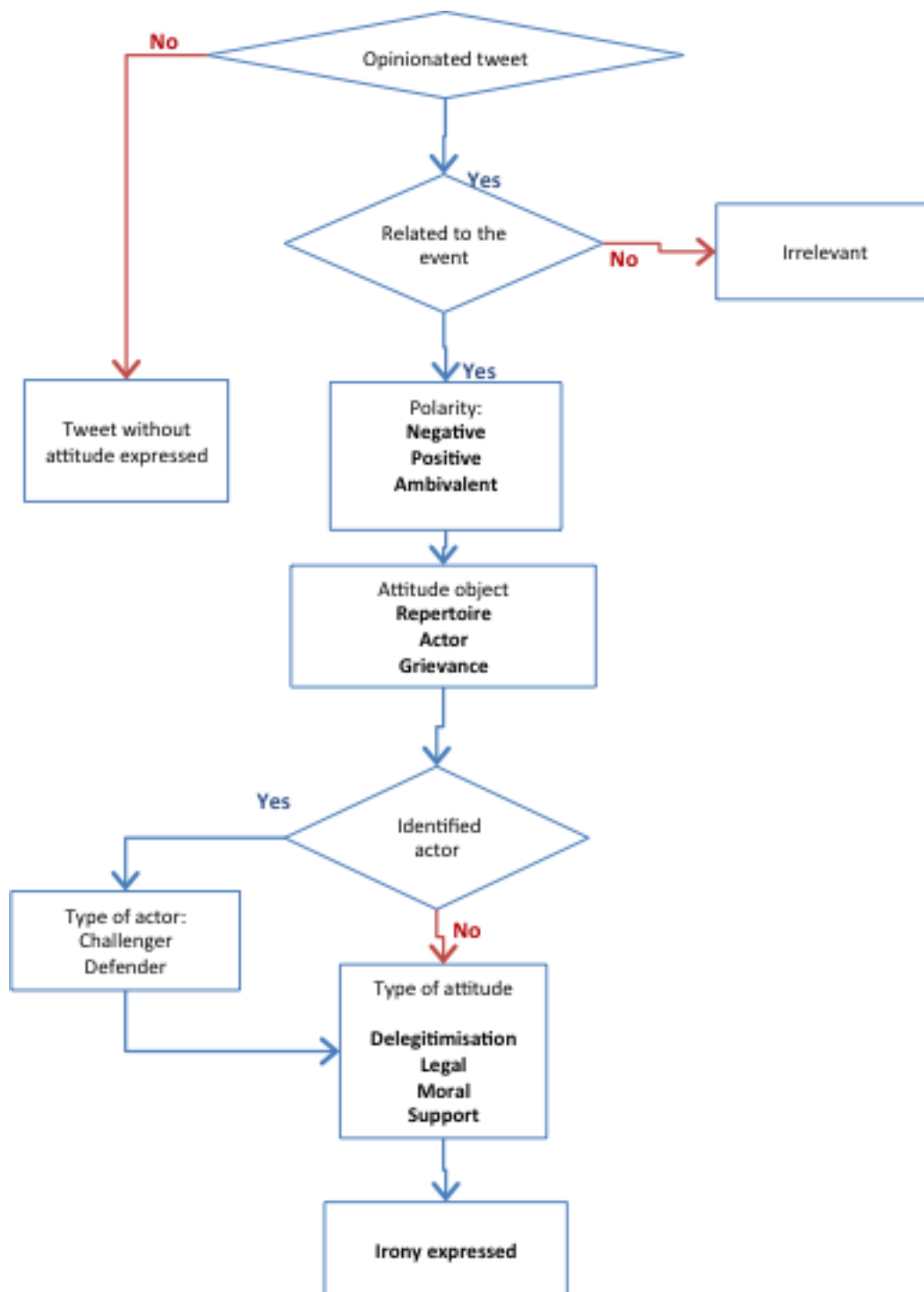


A total of 3200 tweets were coded with cross-coding for different subsets by four coders (Average reliability between pairs of coders=71)

**Table A4.2 – Frequency of top keywords by category, event and language**

Event	Keyword/keyphrase	Code	Polarity	Language	Frequency
escrache	escrache	repertoire		Spanish	165
diada12	independencia	grievance		Spanish	32
SUN	estatut	grievance		Catalan	32
SUN	retallat	no_clas	negative	Catalan	29
12O13	#12O	grievance		Spanish	28
SUN	#xist	contradictory		Catalan	18
escrache	"libertad de expresión"	legal	positive	Spanish	16
escrache	nazismo	delegitimation	negative	Spanish	16
escrache	"libertad de manifestación"	legal	positive	Spanish	14
diada13	independencia	grievance		Spanish	12
SUN	estatwit	contradictory		Catalan	10
escrache	nazis	delegitimation	negative	Spanish	9
escrache	legitimados	legal	positive	Spanish	8
diada12	"en contra"	no_clas	negative	Spanish	8
escrache	"no es delito"	legal	positive	Spanish	7
escrache	"no hubo delito"	legal	positive	Spanish	7
12O13	#12O	grievance		Catalan	6
SUN	"ja podem redactar"	grievance		Catalan	6
diada12	"gritar independència"	repertoire		Spanish	6
SUN	"constitució catalana"	grievance		Catalan	6
25s	gobierno	defender		Spanish	6
escrache	PP	defender		Spanish	5
escrache	ETA	delegitimation	negative	Spanish	5
12O_12	#mejorunidos	grievance		Spanish	5
SUN	"insuficient"	no_clas	negative	Catalan	5
SUN	"nació d'europa"	grievance		Catalan	5
25s	25s	repertoire		Spanish	5
AED	#adeuespanya	no_clas	positive	Catalan	4
diada12	no	no_clas	negative	Spanish	4
SUN	TC	defender		Catalan	4
AED	"dret a decidir"	grievance		Catalan	4
15m	prohibe	legal	negative	Spanish	4
15m	15M	challenger		Spanish	4
15m	discurso	repertoire		Spanish	4
escrache	cospedal	defender		Spanish	3
escrache	pp	defender		Spanish	3
escrache	"no encuentra delito"	legal	positive	Spanish	3
escrache	legales	legal	positive	Spanish	3
12O_12	#12O	grievance		Spanish	3
12O13	genocidio	moral	negative	Spanish	3
12O13	vergüenza	moral	negative	Spanish	3
diada12	"voto para"	no_clas	positive	Spanish	3
diada12	agraïment	apoyo	positive	Catalan	3
diada12	"tu puta madre"	delegitimation	negative	Spanish	3
diada12	#CuléCabrónEspañaEsTuNación	delegitimation	negative	Spanish	3
diada12	sinpa	delegitimation	negative	Spanish	3
diada12	tonto	delegitimation	negative	Spanish	3
diada13	gilipollas	delegitimation	negative	Spanish	3
diada12	derrotó	no_clas	negative	Spanish	3
diada12	"mala imagen"	no_clas	negative	Spanish	3
diada12	"no a"	no_clas	negative	Spanish	3
diada12	"no apoyo"	no_clas	negative	Spanish	3
diada12	"no querer"	no_clas	negative	Spanish	3
diada12	"un poco de respeto"	no_clas	negative	Spanish	3
diada12	lamentable	no_clas	negative	Spanish	3
diada12	queiebra	no_clas	negative	Spanish	3
SUN	"campanya d'apadrinament"	no_clas	negative	Catalan	3

Figure A4.3





## Appendix 5 – Media sources

Daily	Characterization
El Pais	<p>Largest and most-read nationwide newspaper in Spain.</p> <p>Loosely liberal political orientation and closeness to the Socialist party.</p> <p>Average Printed Copies :359.809</p> <p>Net Circulation Average : 292.227</p> <p>Media group: Grupo Prisa</p>
La Vanguardia	<p>Catalan newspaper with daily editions in Spanish and Catalan - Barcelona's major daily.</p> <p>Center-right (Conservative catalan nationalism)</p> <p>Average Printed Copies: 180.939</p> <p>Net Circulation Average 152.320</p> <p>Media group: Grupo Godó</p>
El Periodico de Catalunya	<p>Territorially based newspaper with daily editions in Spanish and in Catalan.</p> <p>Close to the left Catalan parties.</p> <p>Average Printed Copies :128.609</p> <p>Net Circulation Average: 101.053</p> <p>Media group: Grupo Zeta</p>
El Mundo	<p>Second largest newspaper in Spain.</p> <p>Centre-right political orientation.</p> <p>Average Printed Copies : 248.463</p> <p>Net Circulation Average : 172.427</p> <p>Media group: Unidad Editorial, RCS</p>