

## **Elite-Public Interaction on Twitter: EU issue Expansion in the Campaign**

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## ABSTRACT

Why do some issues receive more interest from the public while others do not? This paper develops a theoretical and empirical approach that explains the degree to which issues expand from the elite to the public. We examine how candidates in the 2014 European Parliament elections talked about EU issues, in comparison to other political issues. We rely on data collected from Twitter and use a combination of human coding and machine learning to analyse what facilitates interactions from the public. We find that most political actors did not try to engage with the public about EU issues, and lack of engagement results in less interactions from the general public. Our findings contribute to understanding why EU issues still play a secondary role in European politics, but at the same time highlight what low cost communicational tools might be useful to overcome this expansion deficit.

**Keywords:** engagement, issue politicization, EU issues, social media communication, EP elections

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Why are some political issues crucial in structuring public opinion while others are not? In this paper we argue that politicians have an important role throughout this process: they can decide how to address a given topic, and this has consequences for how the public reacts. This expansion of issues from the elites to the public is an important part of the process through which issues can structure political competition, a process that is broadly defined as issue politicisation. We offer evidence in support of this argument based on an analysis of how candidates for the 2014 European Parliament elections (EP) chose to discuss EU issues on social media and how the public reacted to their messages.

We focus on this case because the role ‘Europe’ plays in the national politics of European Union member states has been a key and complex question (Hobolt & De Vries 2016) since the early days of the European Economic Community (e.g. Reif & Schmitt 1980) and remains an open debate in the literature. Although a number of studies evaluate the degree to which EU issues are politicised, a crucial facet of politicisation, expansion of European topics from elites to the public, is often times difficult to assess (De Wilde 2011; De Wilde et al. 2016).

Communication is at the centre of expansion, insofar as it relies on communicative practices attempting to increase or decrease the extent to which the public engages with the issue. The arrival of social media has added a new dimension as it allows political elites to directly interact with citizens on a much wider scale than before. Twitter in particular, has been shown to enable rapid information flow through a combination of broadcast diffusion and media contagion, but also allow politicians to exercise through shaping information flows (Habel & Theocharis 2018; Kwak et al. 2010). Asking questions, addressing other users, or responding to them, allows elites to directly involve citizens in the conversation, facilitating a closer relationship with them (Graham et al. 2013) and boosting the resonance of specific issues with

the public (Walter et al. 2017). At the same time, social media offers the public the chance to engage and interact with the issues/topics brought forward by politicians, often times using also uncivil language (Theocharis et al. 2020).

Overall, by enabling an instantaneous reaction by the viewers of those messages, Twitter allows for a new communication dynamic between citizens and elites, forcing the latter to consider their audience's reactions and demands, and be more strategic about the content they release on social media. In the context of potentially growing importance of 'Europe' for structuring national competition, some candidates could use engaging communication strategies to further attract attention to the topic (Lin et al. 2014), while others can use a different strategy—adopting a style that is more unidirectional in nature, which we categorize as 'broadcasting'—to limit the attention to the topic by the public (Graham et al. 2013).

By focusing on the reaction of the public to the different ways in which "Europe" is presented, we are now in a position to evaluate the degree to what these communication strategies are effective, but it also offers an unobtrusive observation of how issues expand from elites to the public. Ultimately, this will allow us to discern whether political actors can manipulate the degree to which EU issues structure national political completion through the use of modern communication strategies, or whether EU topics are simply less appealing to the public irrespective of the efforts of political elites. We study the Twitter communication of candidates in the runoff to the 2014 EP campaign in four EU countries: Germany, Greece, Spain, and the UK. Relying on a combination of human coding and machine learning we classify tweets in terms of content and communication style.

Our contribution is threefold and has implications for both EU politics and communication research. We extend the literature on political communication using social media

by incorporating the use of style-related features, showing that style choice along the broadcasting and engaging axis can facilitate issue politicisation. However, despite these style-related advantages, we find that most political actors at the time of the 2014 EP elections did not try to engage with the public on EU issues, which contributes to our understanding of why EU issues still play a secondary role in European politics. Finally, as Twitter's potential role in shaping politics is growing in importance (e.g. Barberá & Zeitzoff 2017; Jüngherr 2016), we show how this can be incorporated into the research of issue politicisation, traditionally based on press releases or Euromanifestos (e.g. Adam et al. 2019; Braun & Schmitt 2018).

## **EU ISSUE EXPANSION ON SOCIAL MEDIA**

### **EU issue politicisation**

The EU dimension<sup>1</sup> of political competition generally describes political stances related to both the extent of European integration (the policy scope of the Union) and the allocation of resources in the Single European Market (the policy direction of the Union) (Bakker et al. 2012; Gabel & Hix 2002). Many features of previous research considering the role of EU issues in structuring the political competition can be understood through applying a politicisation framework. The broader concept of politicisation (De Wilde 2011) includes issue salience, conflict between actors and diffusion among elite and to the public (De Wilde 2011; De Wilde et al. 2016; Hutter & Kerscher 2014).

The politicisation of EU issues was mainly studied with an emphasis on changes in salience and conflict (see for example Braun et al. 2016; Spoon 2012; Wüst 2009), using an actor-oriented framework consistent with niche party strategy (e.g. Meguid 2005) and, relatedly, issue entrepreneurship (Hobolt & De Vries 2015). The third facet, diffusion, covers both the

increase in the number of elite actors involved in the debate around European issues and the existence of a discussion around the EU that is no longer exclusively located at the elite level but also penetrates the larger public (De Wilde et al. 2016; Hutter & Grande 2014).

Traditionally, diffusion was studied by keeping the public (or voter) and elite levels isolated from each other. It comes as no surprise that expansion towards the public is the most often overlooked facet of politicisation (Hurrelmann et al. 2015), mostly due to the difficulty of bridging these two levels, i.e. elite and public.<sup>2</sup> On the voter level, the EU dimension can structure vote choice (e.g. De Vries 2007; Hobolt & De Vries 2016; Hobolt & Spoon 2012), however, in comparison to national issues, the EU dimension still has a reduced relevance for structuring vote choice in both national and EP elections (De Vries & Hobolt 2012), maintaining EP elections in the category of second-order elections (Reif & Schmitt 1980).

At the elite level, measuring diffusion almost exclusively implied exploring if there is an increase in the number of non-executive actors involved in the debate by relying on statements regarding European integration reported by mass-media (Grande & Hutter 2016; Kriesi et al. 2012). In this regard, previous works show an increased diffusion of European issues (Hutter & Grande 2014; Hutter & Kerscher 2014; Kriesi & Grande 2014). But elite statements alone are at best an imperfect proxy for diffusion as they ignore audience resonance, i.e. the degree to which EU issues are followed and debated by the public, which is crucial for evaluating the diffusion and ultimately the politicisation of European issues (De Wilde 2011; De Wilde et al. 2016; Statham & Trenz 2015). When looking at elite-public linkages, any effort of elites towards expansion should be evaluated through the lens of the public, which can help account for an expansion conceptualization that reflects its dynamic nature.

## **Social media as platform for expansion**

While most facets of politicisation have traditionally been studied using press releases, manifestos, and coverage by the press, the arrival of social media, and especially Twitter, has added a new dimension that offers distinct advantages (Popa et al. 2019). These are related to the platforms' built-in affordances which not only support, but can shape the interaction around politics, a communicative process that is integral to the notion of expansion considered here.

In the electoral arena, Twitter allows candidates to highlight issues repeatedly and not just through the party manifesto, at a timing of their own choice, and using frames that they have chosen (Jüngherr 2016). For example, previously, some political elites tried to reduce the politicisation of the EU dimension by manipulating the salience and blurring their own stances on European issues (Rovny 2012). Now, the opportunity to directly communicate with the public via social media also increases their ability to shape its diffusion to the public by deciding how they (de-) emphasize content. This possibility constitutes a technological affordance of this communication platform that can be used for strategic purposes (Tromble 2018).

Overall, social media messages can serve as a tool for attracting or diverting attention from a topic. So efficient can this tactic be in fact, that its extreme version is commonly used by authoritarian regimes to consciously redirect the attention of citizens to trivial matters in times of political unrest (King et al. 2017). Furthermore, from the moment that content is posted on Twitter by a well-connected actor (elite or otherwise), it can travel quickly (Kwak et al. 2010)—across potentially diverse networks (Barberá et al. 2015). Thus, tweets have the potential to create so-called information cascades triggering debate across the public or between the public and elites, often leading to certain topics becoming 'viral'.

Undoubtedly, Twitter communication or users are not representative of the general population. Politically active users who follow politicians or interact with them in some manner on Twitter belong to the more interested part of the citizenry, tend to be male, live in urban areas and reside on the political margins (Barberá & Rivero 2015). Thus, on the one hand, content-related differences in terms of triggering reactions can be limited, given this homogeneity of the public on Twitter. On the other hand, those expected to engage with reactions are those who are already motivated and participate in politics (Kalogeropoulos et al. 2017). As a result, if we fail to document extensive expansion on this more politically interested group, it is unlikely to find higher expansion for other segments of the general public.

## **ELITE AND PUBLIC INTERACTIONS ON TWITTER: HYPOTHESES**

We investigate how the public reacts in terms of direct replies to the content communicated by the political elites (in our case: candidates in the EP elections), which is a function of both what politicians talk about (content) and how they do it (style). Our conceptualization of expansion is one that relies on the idea of communication and dialogue, rather than on amplification or spread of information. Replies to a specific tweet are important since they allow us to assess not only the degree to which the public<sup>3</sup> pays attention to politicians, but whether there are signs of a potential dialog developing around specific content areas.

Each topic or political issue can be politicized and diffused to the public to a different extent, so we will compare the degree of EU issue expansion to the expansion of other political topics. The fact that EU issues have a secondary role in structuring vote choice provides initial evidence for the limited success in the expansion of EU issues. Beyond the electoral arena we also know that citizens are less likely to engage with EU issues in comparison to national affairs



(Baglioni & Hurrelmann 2016) and that important EU reforms have a limited capacity to engage the interest of the public both offline (Popa et al. 2016; Schmitt et al. 2015) and on Twitter (Nulty et al. 2016). This indicates that EU related content faces a tough audience, and thus limited expansion to the public persists:

**Limited response hypothesis:** *EU related content attracts fewer replies from the public than content related to other political topics.*

Whether the general public remains a passive audience or engages in dialogue also depends on how the elites approach talking about the EU. We want to understand which communication choices can contribute to expansion, but also when and how elites employ these communication tools. Generally, initiating engaging communication stimulates dialogue and discussion around any political topic (Stromer-Galley 2014) and dialogue and interaction is the very essence of the expansion process. Furthermore, style and tone related features of social media communication are influential for attracting engagement from the public (for example studies on Facebook by Heiss et al. 2018; Xenos et al. 2015).

Previous findings show that these insights also hold for Twitter political communication: engaging communication style used by candidates attracted more responses in the context of 2014 EP elections campaigns (as shown in Theocharis et al. 2016, 1015). Engaging communication on Twitter is defined as a style that encourages dialogue (invites) or sustains dialogue (responds), often times mentioning directly other people (by their [user]name). However, previous work is much less informative whether the topic might condition the effectiveness of engaging communication. Similar positive engaging style effects have been

shown for example in domains of corporate communication (Etter 2014) and NGO communication to stakeholders (Lovejoy et al. 2012). This suggests that the engaging style benefits are not domain specific, which would indicate for our case that engaging style should work across different political issues in a similar manner. Thus, we hypothesize that:

**Effective engagement hypothesis:** *EU related content presented in an engaging style attracts more replies from the public than EU related content presented in broadcasting style.*

Political actors should have an incentive to depart from the broadcasting baseline if engaging communication is particularly useful for them, i.e. if they want to facilitate the discussion. This is especially important since broadcasting communication requires less effort. Unsurprisingly, politicians overwhelmingly make broadcasting – as opposed to engaging – use of Twitter (Lyons & Veenstra 2016; Theocharis et al. 2016).

This should be no different in our case: using a broadcasting style may satisfy the need to talk about the EU (even positively), while it does not make issues related to EU dimension an integral, mobilizing, and decisive component of citizens' vote choice considerations. It is also the least costly campaign strategy, as no positional or salience change is needed (Meyer & Wagner 2017) but matches the expectation of the public and the “European” context of the campaign.

Politicising of the EU dimension is more beneficial to some actors than others, especially those located at the fringes of the political spectrum (De Vries & Hobolt 2012; Hobolt & De Vries 2015). At the same time, putting EU issues in the centre of electoral communication creates risk and uncertainty (in terms of electoral outcomes) for pro-EU mainstream candidates (Green-Pedersen 2012), hence they may have little incentive to actively contribute to the

expansion of the topic. In fact, in the past they strategically resisted attempts to politicize EU issues (Hooghe & Marks 2009; Rovny 2012) and using a broadcasting communication style is compatible with these strategic efforts. Thus, as most mainstream political actors have little incentives to employ Twitter communication strategies that will contribute to the expansion of the EU issues, our general expectation is that:

**Limited engaging hypothesis:** *EU related content is, on average, presented using a less engaging communication style compared to content that pertains other political topics.*

## **DATA AND MEASURES**

### **Case selection and data**

We analyse campaign communication covering the last 3 weeks before the 2014 EP elections, when we would expect EU related issue considerations to be among the most important among the public. Given resource constraints pertaining to the extensive content coding described below, we selected four countries for our main analysis: Germany, Greece, Spain, and the UK. This selection was driven by two main substantive considerations.

These four countries are heterogeneous in the general public's support of the EU (1), and their relationship with the EU in the public debt crisis of the Eurozone also varies (2). Regarding public opinion towards the EU, this case selection offers a wide coverage with countries ranked at 3 (UK), 6 (Greece), 17 (Spain), and 23 (Germany) out of the 28 countries ordered from not favourable to favourable towards the EU (Schmitt et al. 2015). Furthermore, we have a severely affected and rather EU-sceptical Greece (received bailout, only 44% consider the EU membership a good thing) opposed to a Germany where support for the EU is rather high (69%

consider EU membership a good thing) and comparatively stable, with consequences of the sovereign debt crises being hardly recognised. These two aspects are expected to contribute to the general content and tone of the EP elections with candidates competing in different arenas in terms of what positions and strategies are electorally viable or can maximize votes.

For each of these countries we, first, collected the EP candidate list of all major parties and for each candidate we searched for her/his Twitter account name (January-April 2014). Not all candidates had Twitter accounts and not all candidates who had accounts were active on Twitter in this period.<sup>4</sup> Through the Twitter firehose, Kantar Public collected all social media communication centred around the candidates. This encompasses (1) every tweet, re-tweet and reply of a candidate, (2) all the replies to these tweets, and (3) all tweets where candidates were mentioned in any form.

Figure 1 shows that the four countries had many candidates running, but these countries are around the EU average (or slightly above) for candidates active on Twitter. All countries except the UK hover around the EU median for the proportion of active candidates. The candidates from these four countries tweeted quite a lot, from 32 to 46 tweets during the campaign period (replies or retweets excluded), putting them at 19 to 24 rank in Europe (overall mean 31 tweets). While there are between-candidate differences, we also see that the four countries in our main analysis are quite comparable regarding many of the Twitter use characteristics, with the UK having the largest involvement in terms of candidate presence, but still not the most output in terms of tweets.

**Figure 1:** Overview of Twitter use and data from the 2014 EP election campaign (last 3 weeks)

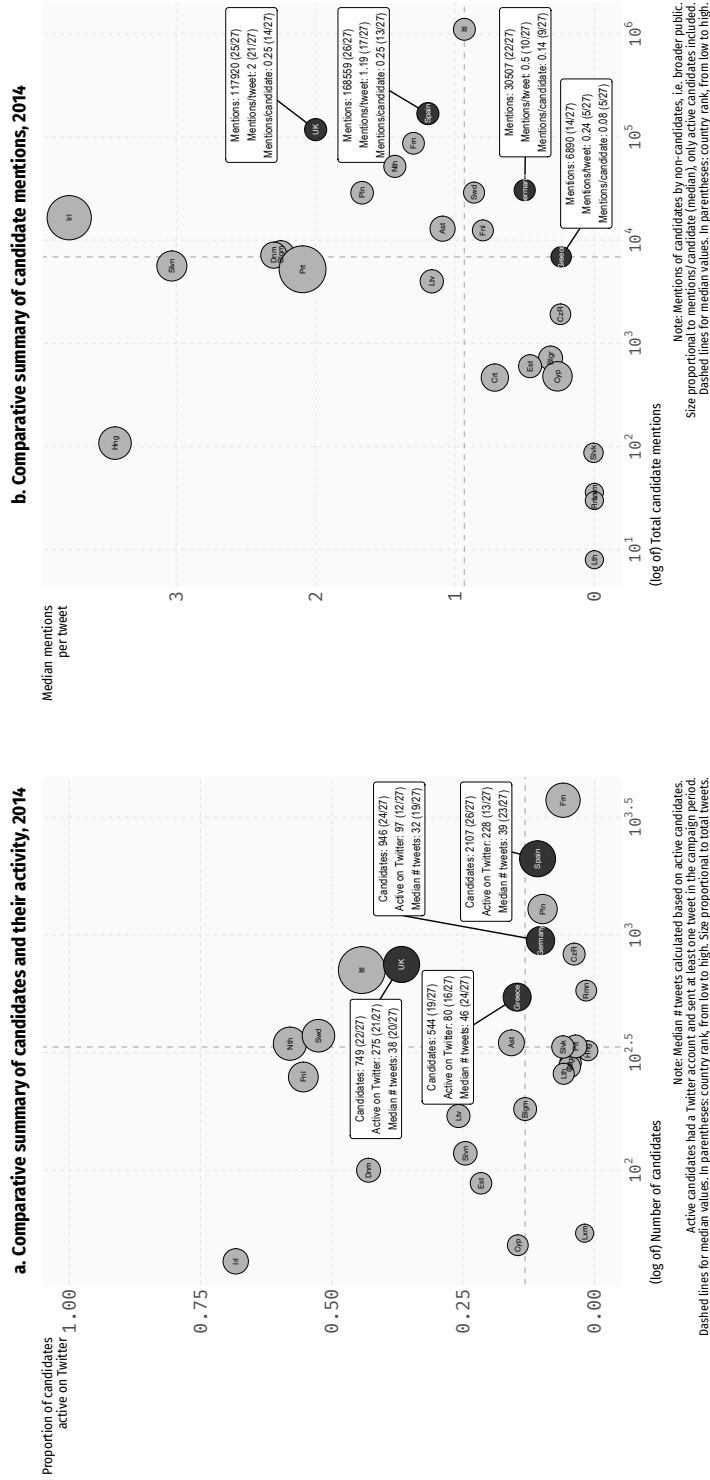


Figure 1 also shows patterns of reply tweets by users who are not EP candidates (approximate “public”) mentioning any of the candidates.<sup>5</sup> There is substantial variation in the public engagement on Twitter across all EU countries, but also within the block of four countries selected. In absolute number of tweets, Spain and the UK are countries with a lot of candidate mentions from the public, while Greece and Germany are much lower, but still at EU median or above. In these latter two countries, we also see a much less active or responsive public: on average, only every fourth (Greece) or second (Germany) tweet receives some reply or mention.

These differences chime well with the survey results from the Standard Eurobarometer 84 (2015): our countries represent a wide span in terms of daily or almost daily Internet usage (from 48% in Greece to 74% in the UK), and daily social media use (from 26% in Germany to 44% in the UK). Overall, while the actual number of tweets varies, candidate activity in these countries was slightly above EU average. There is much more variation regarding activity by the public, where the four countries studied here provide insights about low (Greece and Germany) and higher (UK and Spain) Twitter activity during this campaign.

### **Outcome measures**

We analyse the original tweets by candidates in this period and direct replies by the public to those tweets. These tweets are original in the sense that they were generated by the candidate (or her team) as a regular tweet with some content or a tweet that is meant as a reply to someone. These tweets do not include re-tweets by the candidates. We exclude re-tweets because they do not involve the same cost or motivational elements as writing an original tweet and deciding about the style. A re-tweet might or might not mean endorsement of content, but it is sure that the politician analysed did not have control of the content written. This does not mean that re-

tweeting EU content does not contribute to the salience of the issue, rather it means that for conceptualization of expansion, original content matters most.

**Table 1:** Descriptive information for tweets analysed

	Candidates	Parties	Original tweets	Replies from the public	Prop. with a reply
Germany	80	10	5223	4453	0.329
Greece	70	8	4892	2630	0.200
Spain	184	12	18063	36360	0.289
UK	224	28	18490	37547	0.421

*Notes:* Prop. with a reply = the proportion of original tweets by politicians that received at least one reply. Reply counts are direct replies matched with each tweet, hence they are more restricted than the numbers from Figure 1. Active accounts only: candidates with at least 3 tweets.

We measure the degree of expansion through the number of replies received by each candidate tweet. We only count replies that have some content and are not mere spam messages. Beyond the reasons previously detailed, we exclude here re-tweets as a measure for expansion also because the re-tweet count information is rather crude: while we can check whether the re-tweets are from another candidate or someone else, the number of re-tweets a tweet received is the only measure available, so we do not know in which exact period these were posted, by how many different actors, and with what goal.

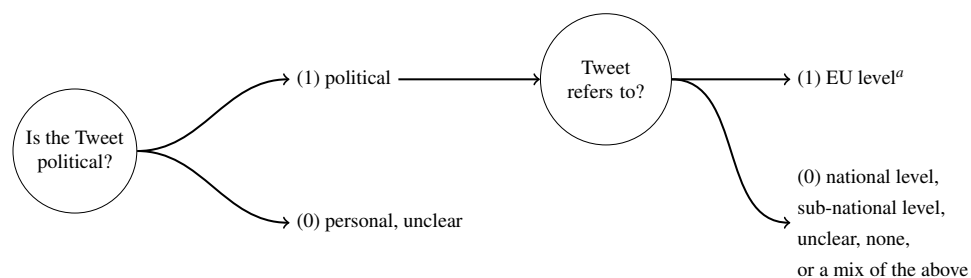
While our coverage of candidates is relatively high compared to previous elite studies, there are important sub-groups missing (such as no candidates from the Golden Dawn in Greece) or represented by few candidates with limited activity (such as AfD in Germany). This is, however, in line with the observation that at the time of the data collection, smaller and extreme (especially anti-EU) parties were less likely to be on Twitter (Nulty et al. 2016), a limitation we return to later.

### **Content coding**

We apply a hybrid approach to content coding: we rely on trained human content coding on a random subset of our data, which then is extrapolated to the full dataset using machine learning.

On the one hand, relying only on unsupervised machine learning (like topic models) would be difficult as engaging style – but especially political content – is difficult to code in an unsupervised manner. On the other hand, human annotation of the full dataset would not be possible, given the size and associated cost.

**Figure 2:** EU content coding




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<sup>a</sup> “the tweet refers explicitly to an EU topic, an EU actor (e.g. an EU commissioner or an EU political party; note: do not look at the handle), level of jurisdiction at the EU level (i.e. issues that are decided upon at an EU level), or there is a direct mention (or hashtag) to EU elections”.

Our research team compiled a detailed codebook, covering both style and content features of the communication and we recruited six coders, who were extensively trained and carried out various preparatory tasks in order to calibrate the coding process. The overall goal was to have a random selection of 7000 tweets coded in the language of each of the four countries, of which approximately 3500 tweets to be coded by two coders. We use two coders for a subset of the human coded tasks to be able to evaluate the coding quality, expressed as coder agreement and reliability. In all cases, this were a mix of tweets sent by MEP candidates and those by the more general public mentioning the candidates or interacting with them.

Two tweet level features coded based on the text are of relevance: communication style and EU content. For communication style, we differentiate between a broadcasting (0) and an



engaging style (1). Broadcasting is defined as ‘a statement or an expression of opinion’; engaging is defined as ‘directed to someone else/another user (direct response)’. This results in a binary classification of a tweet.

For EU related content we employ a two-stage strategy. First, we make sure that the tweet is about politics, for which we used coders decided whether the political, personal, or unclear. Tweets that were identified to be political were coded whether they refer to the EU or not. Coding is summarized in Figure 2 (coding tasks reported in Appendix 1), including exact wording for the options. As is visible in the coding, our operationalisation of EU issues covers a political issue that is discussed in conjunction with the EU (i.e. the role the EU might have in redistribution or immigration regulation). Second, it also covers specific EU issues (for example common policies or the single market); these will be coded as EU issues even if national actors are involved in the discussion. An important benefit of our coding is that we will be comparing tweet with EU issues (or content) to tweets that are either referencing (sub-) national topics or topics that lack a clear reference but are political. It is important to assure that we employ a fair comparison, i.e. do not compare for example clearly personal tweets to EU related tweets. In addition to the “Unclear” category, coders were allowed to pick multiple answers, which assures that we account for situations where a tweet is more complex. We regard a tweet to be about EU issues if one of the picked categories was EU level reference.

Using the human annotated—labelled—data, we trained our classifier for each content category of interest, where we estimated which text features (uni- and bi-grams) best predict these category labels. We employed *xgboost* (Chen & Guestrin 2016), a state-of-the-art machine classification method that relies on gradient boosting (an ensemble of decision trees), which was recently found to maximize classification accuracy in most tasks (Olson et al. 2017). We trained

this classifier using 5-fold cross-validation to identify the parameters that maximize in-sample performance, and then measure how well it performs on a random 20% of the labelled data (test set) that was left out of the estimation. We applied the same pre-processing steps and the classifiers trained and extrapolate our human coding to the full dataset including all tweets.

As displayed in Table 2, both human coder agreement and machine learning performance were found to be very good. Some of the reliability scores were weaker, but for our machine learning classifier lower reliability scores simply mean more uncertainty since if there was disagreement between coders, we include the same text twice with different labelling.

**Table 2:** Human coding and out-of-sample performance of ML classifiers

	<i>(1) Human coding</i>				<i>(2) Machine learning</i>				
	Two coders/Total	% in data	Agree	<i>K</i>	Acc.	Prec.	Rec.	F1	
<i>Engaging (= 1)</i>									
Germany	2876/6197	55	79	.57	.82	.80	.89	.84	Germany
Greece	2998/5983	49	85	.70	.88	.83	.94	.88	Greece
Spain	1971/5713	66	78	.53	.81	.83	.90	.86	Spain
UK	3327/6662	75	85	.62	.90	.92	.96	.94	UK
<i>Political (= 1)</i>									
Germany	2876/6197	54	83	.66	.79	.83	.79	.81	Germany
Greece	2998/5983	82	86	.55	.85	.89	.94	.91	Greece
Spain	1971/5713	81	89	.65	.83	.87	.93	.90	Spain
UK	3327/6662	69	88	.72	.83	.89	.87	.88	UK
<i>About EU (= 1)</i>									
Germany	1409/3606	46	75	.82	.74	.75	.65	.70	Germany
Greece	2214/5202	12	90	.83	.92	.69	.61	.65	Greece
Spain	1487/4745	14	93	.77	.93	.84	.63	.72	Spain
UK	2084/4879	22	94	.89	.93	.93	.74	.82	UK

*Notes:* Agreement (between coders) is expressed as % and *K* stands for Fleiss' *Kappa*. For human coding, the totals for engaging and political content are based on all tweets that contained text, i.e. they were not filtered out. Results for EU content (vs any other political content) are based only on tweets that were coded political. *Accuracy (Acc.)* is the proportion of tweets correctly classified (both 0s and 1s); *precision (Prec.)* is the proportion of tweets predicted to be 1 that were identified by coders as 1; *recall (Rec.)* is the proportion of tweets labelled by humans as 1 that are correctly classified as 1; *F1-score (F1)* is the harmonic mean of *precision* and *recall*.

The second part of Table 2 summarizes the classifier performance results. Overall, we find that our classifiers perform really well for engaging and political content, and their performance is only slightly worse for the EU related content, but still well above what the

complexity of the task would imply. We highlight here how the accuracy of the machine learning algorithm matches and sometimes outperforms the human inter-coder agreement. This indicates that our machine learning algorithm nearly replicates the quality of a human coder, even if its accuracy is not perfect. While there is variation, especially related to the complexity and language clarity associated with some tasks, our machine learning approach performs well. In Appendix 1 we list further details and examples for the coding.

## **Variables**

### *Tweet level variables*

Using the predicted categories from our classifiers, each tweet is labelled as (0) for non-EU content and (1) for EU level content, which we will call EU content from here on. Second, each tweet is labelled either as broadcasting (0) and engaging (1) style, which we refer to as engaging. To reiterate, these codes are based on the language used in the tweets and how well these language features predicted the annotation by our coders. We treat these predictions as dichotomous categories to be in line with the human coding task and also because our classifier chosen maximizes categorization accuracy. However, we can of course think of these quantities in terms of a continuum (or mixture both) both for our content and style variable. Since our text units are short (140 characters at most per tweet) and in many cases included handles or hashtags, we find it unlikely that one tweet contains a plethora of topics or alternates a lot between styles. Nevertheless, since our classifiers result in a predicted probability for each tweet for both content and style, we will carry out additional checks following a continuous approach.

Overall descriptive statistics are summarized in Table 3 and we see between-country variation in the EU issue salience, but also in engaging style. We classify roughly half of the political content by candidates in Germany as EU issue related, but this decreases to around 20%

in UK and Spain and is down at only 10% in Greece. This points to the low salience of EU issues, with the exception of the German case. Engaging style is quite often used in Spain and the UK; however, it is much less frequent in Greece and Germany.

**Table 3:** Descriptive information for content

	Proportion EU content (politician tweets)	Proportion engaging (politician tweets)
Germany	0.481	0.202
Greece	0.106	0.097
Spain	0.183	0.453
UK	0.255	0.442

### *Candidate level variables*

We control for the politician’s Twitter follower count (collected February 2015, log) and two political features: whether the candidate is already a sitting MEP in the 2009-2014 EP and the candidate’s relative ‘strength’ in terms of electability. This is coded as ‘safe’, ‘doubtful’ (reference category), and ‘unpromising’. The measure is based on the candidate’s list position relative to the potential number of seats predicted to be won by his or her party, following the categorization in Giebler and Wessels (2009) and the electoral predictions published by Hix, Marsh, and Cunningham (2014).

### **Modelling**

Our first hypothesis stipulates that EU content attracts fewer interactions from the public (compared to non-EU content), and our second hypothesis stipulates that EU content presented using an engaging style attracts more interaction from the public than EU content presented in a broadcasting style. As politicians tweeted multiple times and politician characteristics can matter, we fit hierarchical models where the tweets are nested in politicians. We first fit a pooled model across all countries with country dummies included in the model. However, given the

heterogeneity between countries regarding especially the EU content salience, we also fit these models separately for each country. Since we are interested in (over-dispersed) counts, we fit negative binomial models where we regress the number of replies a tweet received from the public on the content and style features of the original tweet.

For our third hypothesis, we are interested in the association between style and content in politician communication. Our expectation is that tweets about the EU will be less likely to use engaging style in comparison with other political issues. We estimate a (hierarchical) logistic regression model where the dependent variable is whether the tweet is engaging (1) or broadcasting (0) and the main independent variable is whether the tweet is about EU issues or not. As before, we fit a pooled model and then country specific models as well.

## RESULTS

### Style, rather than content differences explain engagement by the public

What content, and ultimately style, facilitates interactions from the public on social media? We hypothesized that EU related content attracts less replies from the public (H1). The raw data suggest that non-EU content receives on average more responses compared to EU content (1.93 vs. 1.12). When considering the country breakdowns, we see that this is the case for three out of the four countries: Germany (0.91 vs 0.79), Spain (2.21 vs 1.12), and the UK (2.27 vs 1.33), with Greece being an exception (0.51 vs 0.77).

**Table 4:** Mean response count (country specific summary descriptive statistics in Appendix 2)

		Pooled	Germany	Greece	Spain	UK
Broadcasting	Non-EU	1.98	0.79	0.45	2.59	2.54
	EU content	1.08	0.80	0.77	1.15	1.26
Engaging	Non-EU	1.86	1.23	1.00	1.85	2.00
	EU content	1.27	0.77	0.75	0.98	1.52

In Table 4 we look at the average responses split both by style and content. These numbers show that, holding constant for style, the broader patterns are unchanged: non-EU tweets get more replies, with broadcasting, rather than engaging, tweets in Greece and Germany (although minimal) being the exception.

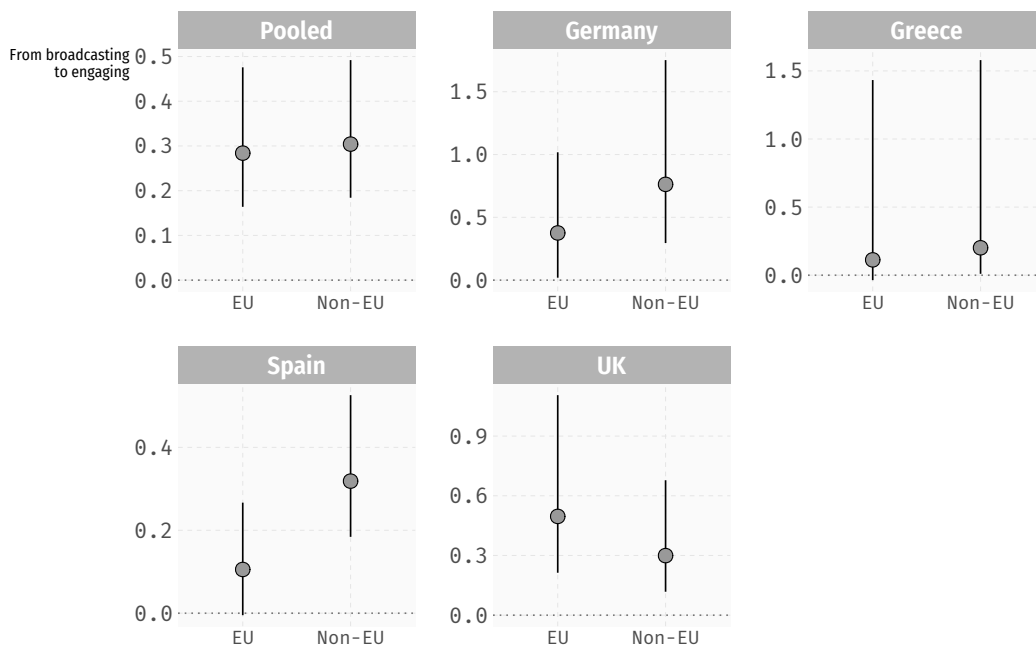
**Table 5:** Responses as a function of EU content and style

	Pooled		Germany		Greece		Spain		UK	
EU content (=1)	-0.13 (0.06)	-0.13 (0.06)	0.02 (0.13)	0.10 (0.14)	-0.19 (0.18)	-0.17 (0.19)	-0.24 (0.10)	-0.16 (0.11)	-0.08 (0.08)	-0.18 (0.09)
Engaging (=1)	0.58 (0.07)	0.58 (0.07)	0.82 (0.25)	0.98 (0.25)	0.88 (0.31)	0.89 (0.33)	0.60 (0.11)	0.64 (0.11)	0.46 (0.09)	0.40 (0.09)
EU × engaging		0.03 (0.06)		-0.42 (0.16)		-0.17 (0.44)		-0.34 (0.14)		0.27 (0.08)
Sitting MEP	0.25 (0.17)	0.26 (0.17)	-0.43 (0.40)	-0.42 (0.39)	-0.05 (0.70)	-0.05 (0.72)	0.31 (0.36)	0.32 (0.35)	0.64 (0.24)	0.62 (0.24)
Safe	-0.01 (0.24)	-0.02 (0.23)	-0.12 (0.50)	-0.10 (0.50)	-0.56 (1.35)	-0.51 (1.34)	0.50 (0.33)	0.49 (0.34)	0.15 (0.42)	0.16 (0.43)
Unpromising	-0.34 (0.18)	-0.37 (0.19)	-0.52 (0.40)	-0.51 (0.40)	-0.71 (1.16)	-0.67 (1.16)	-0.16 (0.23)	-0.16 (0.24)	-0.22 (0.37)	-0.22 (0.37)
Followers	1.56 (0.13)	1.55 (0.13)	1.22 (0.35)	1.22 (0.35)	3.41 (0.62)	3.37 (0.61)	1.91 (0.19)	1.92 (0.19)	0.95 (0.19)	0.96 (0.20)
Greece	-1.06 (0.25)	-1.04 (0.24)								
Spain	0.04 (0.18)	0.05 (0.18)								
UK	0.66 (0.17)	0.67 (0.18)								
Intercept	-0.95 (0.23)	-0.94 (0.23)	-0.71 (0.42)	-0.75 (0.43)	-1.96 (1.12)	-1.99 (1.13)	-1.00 (0.21)	-1.02 (0.21)	-0.51 (0.37)	-0.47 (0.38)
$\sigma$ Intercept	1.37 (0.06)	1.37 (0.06)	1.28 (0.17)	1.26 (0.16)	1.79 (0.26)	1.78 (0.25)	1.11 (0.09)	1.12 (0.09)	1.45 (0.09)	1.46 (0.09)
$\sigma$ EU	0.74 (0.05)	0.74 (0.05)	0.57 (0.14)	0.54 (0.14)	0.41 (0.23)	0.41 (0.23)	0.79 (0.12)	0.85 (0.11)	0.81 (0.07)	0.80 (0.07)
$\sigma$ Engaging	1.04 (0.06)	1.04 (0.06)	1.12 (0.20)	1.12 (0.20)	1.09 (0.36)	1.09 (0.35)	1.00 (0.09)	1.00 (0.09)	1.07 (0.08)	1.06 (0.08)
$\rho$ (Int, EU)	-0.35 (0.07)	-0.35 (0.07)	-0.51 (0.21)	-0.50 (0.22)	0.17 (0.39)	0.17 (0.40)	-0.36 (0.13)	-0.39 (0.12)	-0.40 (0.10)	-0.39 (0.10)
$\rho$ (Int, Eng)	-0.56 (0.05)	-0.56 (0.05)	-0.70 (0.19)	-0.72 (0.18)	-0.54 (0.26)	-0.54 (0.26)	-0.44 (0.09)	-0.44 (0.09)	-0.60 (0.07)	-0.59 (0.07)
$\rho$ (EU, Eng)	0.24 (0.08)	0.24 (0.08)	0.20 (0.27)	0.26 (0.28)	-0.09 (0.43)	-0.07 (0.44)	0.11 (0.14)	0.17 (0.14)	0.38 (0.11)	0.36 (0.11)
N	46668	46668	5223	5223	4892	4892	18063	18063	18490	18490
Politicians	564	564	86	86	70	70	184	184	224	224

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical negative binomial model parameter estimates (logit). All models fitted using Bayesian estimation with 4 chains (2000 iterations, 1000 warmup and thinning 1), with weakly informative priors for the variance parameters.

Since averages for over-dispersed counts are often times misleading, we rely on our multivariate models where we factor in multiple sources of heterogeneity, especially style. Based on our pooled negative binomial model we find evidence for our first hypothesis, but the magnitude of the effect is rather small, especially in comparison with the role style plays in attracting responses. The country specific models show that this effect is mostly driven by Spain, and thus we cannot confirm our first hypothesis in three out of the four countries analysed. On the one hand, this finding gives reason for optimism, since it means that the public is not necessarily less willing to respond and engage with EU related content. On the other hand, we are looking at the most contested last three weeks of the EP election campaign, so engagement with EU content is likely at its maximum.

**Figure 3:** Response count differences for different content and style



Note: Median difference between predicted counts with 95% credible intervals as line ranges. Please note the varying y-axis scales used for easier readability.

In order to test our second hypothesis which stipulated that EU related content presented in an engaging style attracts more replies from the public than EU related content presented in broadcasting style, we extended the models to include a content and style interaction. In Figure 3 we summarize the results from a model where we interact style and content. We display the difference in reply counts between broadcasting and engaging tweets, split for each content area. EU content presented in a more engaging manner attracts larger number of responses than EU content presented in a broadcasting manner (all positive median differences, with Greece and Spain potentially 0), and these differences are similar to those found for non-EU content.

This suggests EU issues are not necessarily special: engaging style could be important for the expansion of EU issues on social media, just as for non-EU issues. It is worth noting that with the exception of the UK, the general pattern suggests that engaging communication is slightly less effective for EU content in comparison to national topics. However, with uncertainty incorporated, we see that in all cases the positive effect of engaging is very similar for both EU and non-EU content.

### **Politicians communicate about EU issues in a less engaging style**

Our third, limited engaging, hypothesis posited that politicians will be less engaging in the style used when they communicate about EU issues in comparison to other political issues. Looking at average engaging scores across content categories (reported in Table 6, Raw data), we find that in all four countries non-EU content is presented using roughly twice as engaging language than EU content.



**Table 6:** Average engaging style

	Pooled	Germany	Greece	Spain	UK
Non-EU content	0.439	0.273	0.102	0.515	0.498
EU content	0.202	0.125	0.054	0.173	0.279

Our multivariate analysis including additional controls reported in Table 7, indicates strong support for the third hypothesis: EU content related tweets are communicated using a less engaging style. The difference between tweets about EU issues and the rest in terms of how engaging they are is largest in Spain, followed by the UK and Germany. In all these cases the probability that a tweet adopts an engaging style nearly doubles when that tweet is not about EU issues (0.19 to 0.36 in the UK, or 0.10 to 0.20 in Germany, for example).

**Table 7:** Communication style as a function of EU content

	Pooled	Germany	Greece	Spain	UK
EU content (=1)	-1.19 (0.06)	-0.82 (0.15)	-0.50 (0.38)	-1.63 (0.10)	-0.91 (0.08)
Sitting MEP	-0.36 (0.19)	-1.30 (0.66)	0.67 (0.81)	-0.73 (0.36)	-0.12 (0.25)
Safe	-0.29 (0.25)	0.05 (0.79)	-2.38 (1.62)	-0.25 (0.35)	0.21 (0.44)
Unpromising	-0.18 (0.21)	0.08 (0.69)	-2.26 (1.31)	-0.50 (0.26)	0.24 (0.38)
Followers	0.36 (0.13)	1.48 (0.46)	1.76 (0.61)	-0.08 (0.20)	0.03 (0.20)
Greece	-1.56 (0.25)				
Spain	1.72 (0.20)				
UK	1.60 (0.19)				
Intercept	-1.69 (0.25)	-1.51 (0.62)	-1.75 (1.28)	0.30 (0.22)	-0.59 (0.38)
$\sigma$ Intercept	1.20 (0.05)	1.42 (0.20)	1.77 (0.28)	1.03 (0.07)	1.24 (0.08)
$\sigma$ EU	0.78 (0.06)	0.40 (0.16)	0.66 (0.39)	0.77 (0.11)	0.72 (0.08)
$\rho$ (Int, EU)	-0.07 (0.10)	-0.18 (0.35)	-0.21 (0.44)	-0.12 (0.14)	-0.28 (0.14)
N	46668	5223	4892	18063	18490
Politicians	564	86	70	184	224

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical binomial model parameter estimates (logit). In Appendix 4 we report results supporting that our findings are unchanged if we treat EU content and engaging style as continuous variables.

However, with the exception of non-EU Tweets in Spain, the predicted probability that a given tweet is engaging is below 0.50, which means that politicians use a broadcasting style more often for political content of any level. We see much smaller differences and larger

uncertainty in Greece, where we have the least number of tweets, but also the lowest frequency of EU content (11%) and engaging style across the board (10%).

## **ADDITIONAL CONSIDERATIONS**

The nature of our engaging style measurement has implications for how we interpret our findings. As described by the short definition of the categories also given to the human coders, engaging tweets usually contain some direct mention of specific users (through including the handle of the user in the tweet), either as a one-to-one dialogue, or with multiple specific targets in the tweet. In addition, questions (without specific users mentioned) or inquiries inviting some follow-up are phrased in an engaging style. Our coding emphasizes the idea that engaging style means also direct interaction, expressed as a direct reply by the communicator. This is subsequently picked up by our classifier as well: the most important predictive n-grams contain some form of '@' (see Appendix 1 for more details).

Most importantly, 32% of the politician tweets labelled as engaging are not direct replies, highlighting that there is more to engaging style than just direct replies. If we think of an engaging style by politicians only as responses, it might mean that the public is not talking about EU issues or does not mention politicians when talking about EU issues. This would then limit the engaging potential (as measured here) of the politicians. This might be partly true, however, as seen more than one third of engaging style by politicians is not predicated on the idea of a direct response or reaction to the public or other politicians. Overall, this further underlines the active role politicians can have in talking differently about topics and ultimately contribute to or limit an issue's expansion to the public.

Second, we looked at expansion reflected through dialogue or exchange. However, we can look at whether the content is being re-shared by the public and at what rate. This could reflect public interest or willingness to spread particular information (although it would indicate a rather shallow engagement level by the public, since no effort or conscious discussion of a topic is needed). We evaluate whether EU or non-EU political content attracts more re-tweets by the public to further contextualize our findings regarding expansion. Engaging communication by the candidate involved either an invitation for dialogue or some interaction with other users. These might have less general relevance for the broader public or the user’s followers, and if they are not used in conjunction with a “.” (in 2014), they are only directly visible to the actors involved in the conversation. Thus, the type of engaging communication we are interested in is unlikely to foster re-tweets.

**Table 8:** Descriptive information for re-tweets (RT)

	Total RT count	Mean RT	Mean RT EU	Mean RT non-EU	Mean RT broadcasting	Mean RT engaging
Germany	25737	4.93	6.64	3.34	5.85	1.28
Germany w/ Spitzen	10147	2.13	2.22	2.06	2.48	0.83
Greece	4491	0.92	1.02	0.91	0.98	0.37
Spain	171124	9.47	8.65	9.66	14.1	3.86
UK	76347	4.13	3.45	4.36	6.03	1.73

As displayed in Table 8, the previously identified cross-country differences in public activity are also reflected in re-tweets by the public, however Germany scores higher than the UK in this regard, but that is only due to the presence of two lead candidates. Furthermore, while in Germany and Greece, EU and non-EU tweets are re-tweeted very similarly, non-EU tweets still attract more public amplification in Spain and the UK. As for style, we see that indeed, broadcasting messages are further spread by the public. Our models with all controls (reported in Appendix 3) confirm these patterns, although there is a lot of uncertainty around the estimated

re-tweet counts. Overall, engaging tweets get fewer re-tweets and content related differences are rather small. This adds further evidence to the possibly weaker motivation for candidates to be engaging: if their outreach and importance is evaluated based on re-tweets, they are better off continuing with broadcasting communication style.

Third, we further explored between-politician variation (reported in detail in Appendix 4) along the lines of the issue entrepreneurship theory (Hobolt & De Vries 2015), testing for systematic differences between candidates running under pro-EU party banners and anti-EU party banners. Results from three different approaches point towards the observation that pro-EU mainstream candidates are more engaging on non-EU topics compared to EU issues, when benchmarked to anti-EU candidates. Our findings indicate that content related differences are present on both sides of the EU position spectrum, but they are twice as large within the pro-EU block: when pro-EU candidates communicate about non-EU topics those are twice as likely to be engaging than when they communicate about EU issues. However, these findings come with quite some uncertainty and between-party differences are often time not statistically significant.

## **DISCUSSION AND CONCLUSIONS**

We set out to analyse one often overlooked facet of EU politicisation, namely the expansion from elites to the public. We relied on Twitter communication in the 2014 EP election campaign, because the widespread use of social media as a campaign communication platform now allowed us to offer a fine-grained measurement of the interaction between candidates and public. Our overall results support the idea of limited EU issue expansion and highlight multiple important characteristics of this process.

The public, on average, is somewhat less responsive to EU issues in comparison to non-EU issues, but these differences are rather small and mostly driven by the Spanish case. The small responsiveness difference is good news for expansion, or how much EU issues are lagging behind. However, as our analysis focuses on the EP campaign period in a context of elections marked by important institutional changes and substantial turmoil at the EU level, this expansion is still very limited. Another insight from our analysis is that the use of a more engaging communication style facilitates the expansion to the public of any political issue, including the EU issues. However, EU content presented in an engaging manner is a rare sight in most countries: politicians use less engaging communication style when talking about EU issues. In the UK, where we estimate that only around 18% of the EU content is presented in an engaging manner, compared to 35% of non-EU content. Yet, we also see the largest differential in attracted responses between engaging EU tweets and broadcasting EU tweets, so large that eventually EU content expansion is stronger than that of the non-EU content.

These results support a pattern where the limited expansion of EU issues among the public (Baglioni & Hurrelmann, 2016) is at least in part responsible for inconsistency and lack of steady increase in the politicisation of EU issues over time. Hence, we can only echo the conclusion of Grande and Hütter (2016) suggesting that the EU politicization cannot only be viewed as a natural consequence increase transfer of authority from nations states. Furthermore, as long as elite communication strategies limit expansion, we cannot expect EU issues to be the decisive factor in structuring political competition across member states.

Our focus on Twitter means that the public we are capturing here is clearly not a representative sample or segment of these societies at large. The self-selected, arguably more informed and interested subset of the general population which we are analysing suggests that

this sample is one of the most likely ones to detect expansion. If elite to public expansion happens, the more interested and engaged citizen should be the vehicles for it.

While our analysis focuses on four countries, their coverage in terms of both general attitudes towards the EU and intensity of social media campaigning by politicians (see Figure 1) do not give us any reasons to believe that the patterns detected would be outliers. Furthermore, the level of overall public engagement on Twitter varied a lot between these countries. This suggests a good general coverage of our case selection, but also points to persistent differences that need to be considered when analysing EU politicisation or the potential role of these issues in shaping electoral behaviour.

Our findings are a decisive step forward in understanding the dynamics of issue politicisation across the EU. The EU dimension which we focus on here can be viewed as a test case. Engaging communication has the potential to increase the number of non-elite actors involved in a political debate, which facilitates issue expansion and thus contributes towards the politicization of a given issue. But there are limitations we have to acknowledge. First, while quite refined, our EU content categorization is by no means perfect. Second, as candidates of smaller and more extreme (usually anti-EU) parties were inactive or barely active on Twitter in the 2014 election, we could be underestimating the level of expansion, although we do not have any reasons to believe the specific dynamics and role of tone and content would be different. As Twitter adoption has increased, future research can develop and extend on the research presented here. Finally, as Twitter is only one social media platform to study, we cannot directly address how commenting behaviour on Facebook relates to our framework. With this caveat in mind, we have shown that we can learn about fundamental political processes and how issues emerge by looking at the interaction between candidates and the wider public in these election campaigns.

## NOTES

<sup>1</sup> We will use EU dimension and EU issues interchangeably.

<sup>2</sup> We use the term expansion to denote the phenomenon of elite-to-public diffusion.

<sup>3</sup> We benchmark the degree of expansion of an issue to the number of direct replies, excluding replies from other candidates to assure that these reflect engagement by the public, in a broader sense.

<sup>4</sup> Through several checks at different stages, we estimate that our data covers 86% of the Greek candidates on Twitter, 89% of the UK candidates on Twitter, 78% of the German candidates on Twitter, and 85% of the Spanish candidates on Twitter.

<sup>5</sup> Users can be from all over the world, but we count them towards a country's response totals because the politician they mentioned runs in that particular country.

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# Online Supplementary Information

Online Supplementary materials for “Elite-Public Interaction on Twitter: EU issue Expansion in the Campaign”. Intended for Online Publication.

# 1 Content coding: additional details

## 1.1 Content coding instructions

INSTRUCTIONS: Social Media and 2014 EU Election Project

Classify each of the tweets you will see in different categories according to their content  
Please note that “prefabricated messages” (i.e. “I just posted a picture on Facebook) are to be classified as hashtag only)

Overview

In this job, you will be presented with tweets about the 2014 European elections. You will need to classify each tweet into the following series of categories:

### Communication Style

\* **Broadcasting** (a statement or an expression of opinion)

*Example:* @PaulBrannenNE -- "Labour's freepost election address dropping through letter boxes across the North East this week."

\* **Engaging** directed to someone else/another user (i.e. a direct response)

*Example:* @GreenJeanMEP -- "@klebudd Thank you Katie. We aimed for a positive campaign #VoteGreen2014"

### Political vs. personal tweet

\* **Political message** (the tweet includes political content-broadly conceived, i.e. if a tweet makes a reference to current political issue, the election, the electoral campaign, candidates and/or political parties)

*Example:* @CrlsMachiavelli -- "The #europewewant will look to tackle the inequalities that hurt us all- inside and outside Europe @EuropeWeWant @RCortesLastra" \_

\* **Personal update** (the tweet has nothing to do with politics and refers to the user's personal life/activities)

*Example:* @yanisvaroufakis -- Two nights ago I saw S, Beckett's Happy Days (Greek National Theatre). Splendid performance(s). Such a relief from you know what... \_

\* **Unclear**

**For political message only:**

**EU vs. national and subnational tweet (more than one category can be selected)**

\* **EU** (the tweet refers explicitly to an EU topic, an EU actor (e.g. an EU commissioner or an EU political party; note: do not look at the handle), level of jurisdiction at the EU level (i.e. issues that are decided upon at an EU level), or there is a *direct* mention (or hashtag) to EU elections)

*Example:* @Env\_Pillar -- "@NChildersMEP worked on a greener CAP in Brussels and as well as policies to stop overfishing #envirohustings <http://t.co/WqSQSbP8bn>"

\* **National** (the tweet refers explicitly to a national topic, a national actor (e.g. the prime minister/chancellor, including national political parties and references to national governments) or level of jurisdiction at the national level (i.e. issues that are decided upon at the national level))

*Example:* @LibDemMEPs -- "The Tories may not be taking the fight to #UKIP, but the Lib Dems are. Letter to @TheTimes from @emcmillanscott <http://t.co/NIIVVFQln>"

\* **Subnational** (the tweet refers explicitly to a subnational topic, including local elections or the Scottish referendum)

*Example:* @NewEuropeans -- ".@GuyVerhofstadt 168,000 EU expat citizens in Scotland if Scots vote for independence? Isn't that a concern of EU? #TellEurope #VVV2014"

\* **Unclear**

## 1.2 Example Tweets

**Classifier note:** To avoid over-fitting, all handle names and hashtag names were replaced by a unique token. Accordingly, we keep information on the use of replies and mentions, but we anonymize it and thus while our coders saw the hashtags, including official EP election ones, our classifiers were blind to those. Keeping the exact hashtags in the text increases the classifier performance for EU content.

**Table 1:** Example tweets for style, human coders

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Broadcasting	BBC News - Mortgage lenders 'blocking' applications from pregnant women  Another dramatic photo from earlier #labourdoorstep #EP2014 Mandy discussing the manifesto document in Wolverhampton @ Labour candidate assault on young boy &gt; Labour suspends Hounslow candidate over historic assault allegation  Even with an un-nuanced vote share projection UKIP on course to get an MP... Will be many more than one with targeted seats/campaigning.
Engaging	@ @ @ @ as my son is finding out as he is setting up business with payments in EURs. More to be done  @ Also on-street parking has been frozen since 2012 so against inflation they have improved in value! Some on-street been reduced  @ I think standing for election demonstrates a great deal of confidence in the British people.  @ dam right it would be foolish. Changing direction in the middle of a fast flowing river is not a good idea.  @ @ sensible I think. No further news from here.

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*Notes:* A random selection from UK Tweets by politicians that were coded Broadcasting or Engaging by both human coders. Handle names (account) removed.



**Table 2:** Example tweets for EU content, human coders

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Non-EU	<p>@ people who immigrate. I'll grant you that it's badly worded, but it is not and has never been our policy to deport legal immigrants</p> <p>@ it was a gorgeous day with loads of positive response on the doorsteps. We're pulling out all the stops :-)</p> <p>@ to be honest I didn't see any SNP activists either but not making any daft suggestions that they weren't out</p> <p>Meriam faces 100 lashes for 'adultery' and death for her beliefs. Pls spread word about this appalling injustice</p> <p>@ Good choice! (We have excellent policies too.)</p>
EU	<p>@ In run up to European election please read and share my article about importance of Arts and EU</p> <p>Out in LB Lambeth with Clapham Ward Conservative local candidates 1 wk to go to 22 May Euros locals #toriestowin</p> <p>Euro elections: Ukip set 4 landmark win but Greens sit in larger group than UKIP Tories and ahead of LDs in polls</p> <p>Ideal rest from Euroelection: Eurovision! Forgot how awful/political it is. Europe united? Not as Russia booed. Time for Commonwealthvision?</p> <p>@ Would you say that backing Juncker was a real signal of good will towards the Uak Govt and views of British public? I wouldn't.</p>

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*Notes:* A random selection from UK Tweets by politicians that were coded non-EU (but political) or EU by both human coders. Handle names (account) removed.

**Table 3:** Example tweets for style, classifier

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Broadcasting	<p>So far Sinn Féin has taken 102 of the 462 council seats in the Six Counties. Party has also taken largest share of vote on 24.1% #le14</p> <p>ICM Guardian poll puts Conservatives ahead in European election poll: 27% Con, 26% UKIP, 24% Lab, Greens 10%, Lib Dem 7%</p> <p>The A Team in @ w @ @ @ Those not at the beach/ park are voting @ #UKIP believe elected councillors should put taxpayers first, rather than party politics. Councils should exist to serve their communities</p> <p>Priceless and so well timed! “What is racism?” Nigel Farage’s disastrous interview on LBC</p>
Engaging	<p>@ @ @ we are pushing the hard work all the way to the line</p> <p>Well done Labour Cambridge folk especially @. @ - you’re a credit to the Wirral! @</p> <p>@ @ @ Nissan, Toyota, Honda invested in UK cos we are in EU</p> <p>@ You are the only Tweeter I have seen that worked that out - #UKIP Scotland - #Tory 5th seat</p> <p>@ @ @ @ @ Thanks Sally and to the campaign team in Northampton.</p>

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*Notes:* A random selection from UK Tweets by politicians that were predicted Broadcasting (resulting probability of engaging < 0.01) or Engaging (resulting probability of engaging > 0.98). Handle names (account) removed.

**Table 4:** Example tweets for EU content, classifier

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Non-EU	<p>Polls open 'til 10 - Need more women like @ @ @ @ @ @ @</p> <p>This isnt about halal meat or animal suffering, but about anti-Muslims and immigrants @ @</p> <p>@ @ on polling stn since 7am 40% stayed voting ukip on exit.</p> <p>Feel like I've paid the North East back a little today for being an amazing place to grow up, live, work and bring up children #NEandproud</p> <p>@ @ @ True that we don't have (m)any(?) geologists on board. If you are one, we'd appreciate your input</p>
EU	<p>Proud to have just voted for @ and to be part of the @ European Team. @ #whyiamIN #EU</p> <p>@ @ Oh yes, forgot. The EU has ordered that the UK sex trade figures (c.£10bn) are incorporated into our GDP!</p> <p>Euro candidates @, @ @ at campaign launch in Croydon with @ #YesWeKhan</p> <p>Good luck to @, @, @, @, @ and the rest of @ MEP team #labourgain</p> <p>20 days, #20reasons to vote #Labour in the EU on 22/5: equality laws support rights of women, LGBT, ethnic groups disabled 17/20</p>

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*Notes:* A random selection from UK Tweets by politicians that were predicted non-EU content (resulting probability of EU content < 0.01) or EU content (resulting probability of EU content > 0.98). Handle names (account) removed.

## 2 Responses: country descriptive statistics

We review some descriptive statistics at the country level, reported in Table 1. In absolute terms, responses to non-EU tweets outweigh the responses to EU tweets at the country aggregate level, with only very small differences in Germany. However, we also see that in all countries we have much more non-EU communication in terms of number of tweets, with Germany being yet again the most balanced country. When we factor in these differences, we find diverging country patterns from two perspectives. In Spain and the UK there is more interaction from the public in general, with much larger response rates for non-EU content. In Germany and Greece, we find generally less interaction from the public, and no substantial differences between content areas. If anything, EU content is proportionally more likely to get a response in Greece.

**Table 1:** Overall responses for different content

	#EU tweets	#Non-EU tweets	#Responses (EU)	#Responses (non-EU)	#Resp/tweet (EU)	#Resp/tweet (non-EU)
Germany	2512	2711	1989	2464	0.79	0.91
Greece	519	4373	400	2230	0.77	0.51
Spain	3299	14764	3704	32656	1.12	2.21
UK	4713	13777	6273	31274	1.33	2.27

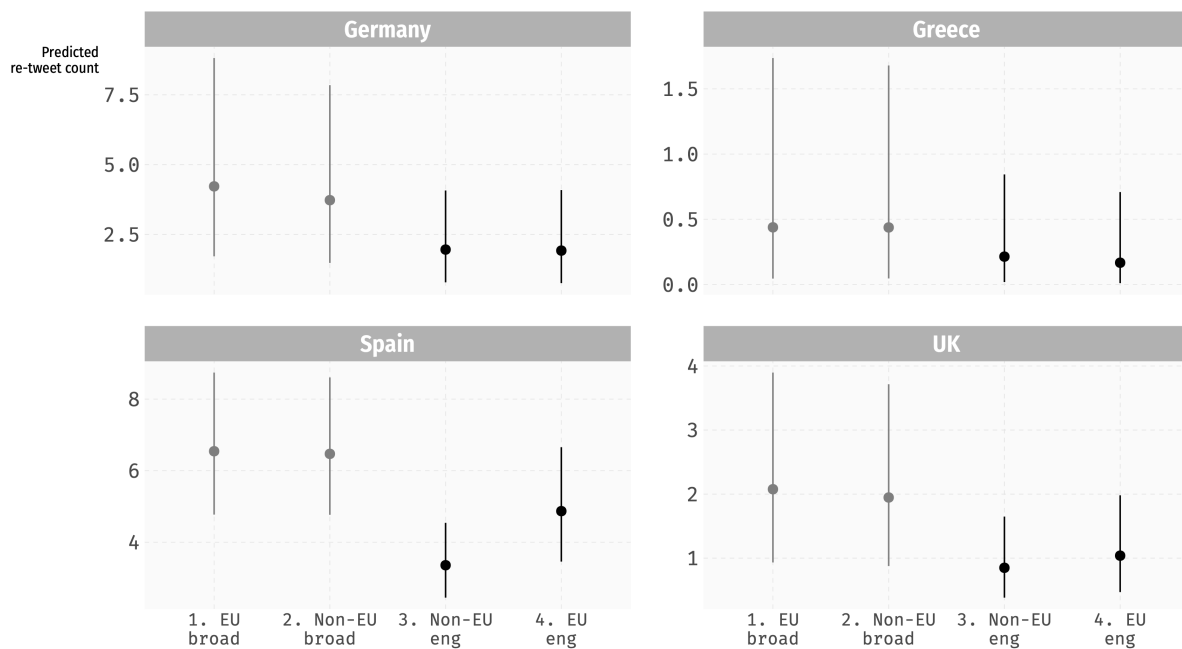
### 3 Re-tweets: model results

**Table 1:** Re-tweets as a function of EU content and style

	Pooled		Germany		Greece		Spain		UK	
EU content (=1)	0.09 (0.03)	0.05 (0.03)	0.11 (0.08)	0.13 (0.08)	-0.03 (0.14)	-0.00 (0.15)	0.09 (0.04)	0.01 (0.04)	0.10 (0.05)	0.06 (0.05)
Engaging (=1)	-0.72 (0.05)	-0.75 (0.05)	-0.69 (0.22)	-0.64 (0.23)	-0.79 (0.37)	-0.75 (0.40)	-0.61 (0.07)	-0.66 (0.07)	-0.80 (0.08)	-0.83 (0.08)
EU × engaging		0.19 (0.05)		-0.15(0.15)		-0.38 (0.63)		0.36 (0.07)		0.14 (0.06)
Sitting MEP	0.35 (0.14)	0.35 (0.14)	-0.92 (0.38)	-0.91 (0.39)	0.28 (0.55)	0.27 (0.53)	0.03 (0.25)	0.03 (0.25)	0.83 (0.23)	0.83 (0.22)
Safe	-0.12 (0.19)	-0.13 (0.21)	-0.16 (0.49)	-0.17 (0.49)	-0.07 (1.09)	-0.04 (1.12)	0.11 (0.24)	0.09 (0.23)	0.16 (0.40)	0.17 (0.43)
Unpromising	-0.48 (0.16)	-0.48 (0.16)	-1.18 (0.40)	-1.19 (0.43)	-0.14 (0.93)	-0.15 (0.93)	-0.55 (0.18)	-0.57 (0.17)	-0.18 (0.36)	-0.17 (0.37)
Followers	1.55 (0.11)	1.57 (0.10)	1.75 (0.28)	1.77 (0.28)	3.12 (0.43)	3.11 (0.42)	1.49 (0.14)	1.48 (0.13)	1.15 (0.19)	1.15 (0.19)
Greece	-1.22 (0.19)	-1.25 (0.18)								
Spain	1.50 (0.15)	1.40 (0.15)								
UK	0.71 (0.14)	0.70 (0.14)								
Intercept	0.31 (0.19)	0.33 (0.18)	1.22 (0.40)	1.22 (0.43)	-1.22 (0.90)	-1.25 (0.91)	1.82 (0.15)	1.86 (0.15)	0.60 (0.36)	0.60 (0.37)
$\sigma$ Intercept	1.08 (0.04)	1.08 (0.04)	1.06 (0.11)	1.06 (0.11)	1.40 (0.17)	1.42 (0.17)	0.69 (0.05)	0.69 (0.05)	1.24 (0.07)	1.23 (0.07)
$\sigma$ EU	0.33 (0.03)	0.33 (0.03)	0.24 (0.11)	0.23 (0.11)	0.32 (0.20)	0.36 (0.21)	0.24 (0.04)	0.23 (0.04)	0.44 (0.05)	0.44 (0.05)
$\sigma$ Engaging	0.87 (0.04)	0.87 (0.04)	1.08 (0.17)	1.10 (0.18)	1.54 (0.33)	1.60 (0.37)	0.75 (0.06)	0.74 (0.06)	0.87 (0.06)	0.87 (0.06)
$\rho$ (Int, EU)	-0.31 (0.08)	-0.32 (0.08)	-0.31 (0.29)	-0.31 (0.31)	-0.31 (0.42)	-0.33 (0.39)	0.14 (0.17)	0.12 (0.16)	-0.41 (0.11)	-0.41 (0.11)
$\rho$ (Int, Eng)	-0.32 (0.06)	-0.32 (0.06)	-0.53 (0.17)	-0.52 (0.17)	-0.45 (0.23)	-0.46 (0.23)	-0.12 (0.10)	-0.12 (0.10)	-0.33 (0.09)	-0.32 (0.09)
$\rho$ (EU, Eng)	0.09 (0.09)	0.07 (0.09)	0.46 (0.31)	0.47 (0.31)	0.19 (0.39)	0.23 (0.39)	-0.28 (0.19)	-0.36 (0.19)	0.12 (0.13)	0.10 (0.13)
N	46668	46668	5223	5223	4892	4892	18063	18063	18490	18490
Politicians	564	564	86	86	70	70	184	184	224	224

Notes: Posterior mean and standard deviation in (parentheses) of hierarchical negative binomial model parameter estimates (logit).

**Figure 1:** Estimated re-tweet counts from the country level interaction models (95% credible intervals)



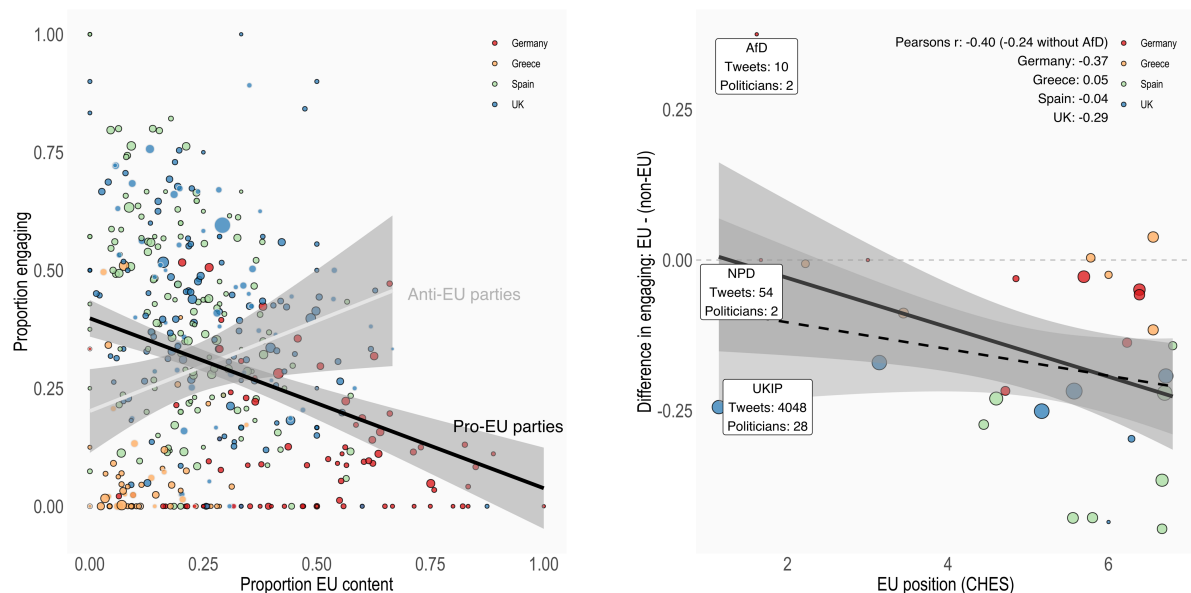
## 4 Non-engaging politicians: additional analyses

### 4.1 EU position differences: between party differences

We investigate whether there are differences in how much politicians engage regarding EU content conditional on their EU position. As candidate level measurement is unavailable, we use the candidate's party's EU position from the 2014 Chapel Hill Expert Survey (Bakker et al., 2015), which ranges from 1 (anti-EU) to 7 (pro-EU).

First, for each politician we calculated the average engaging style and average EU content and displayed a scatter plot with overlaid regression lines for candidates of pro- and anti-EU parties in Figure 1 (left panel). This suggests that pro-EU politicians who focus mostly on non-EU content are also more engaging than pro-EU politicians who mostly focus on EU content. For anti-EU politicians we find the opposite relationship. However, we already see that there is a rather strong country clustering where for example German candidates usually talk more about the EU but are also less engaging.

**Figure 1:** Party EU position, content and communication style



*Notes:* (Left panel): Average proportion of engaging tweets. Pro- and anti-EU distinction is based on whether a party is above or below 4 on the 1-7 scale of EU position from the CHES. Dot sizes proportional to number of tweets by each candidate. (Right panel): Difference in engaging proportion between EU and non-EU content aggregated for each party. Dashed line on data excluding the AfD. Dot sizes proportional to number of politicians.

In the right panel of Figure 1 we offer a descriptive look using a different aggregation strategy. Within one party, we calculated the difference in engaging tweet proportion between EU and non-EU content. A score of 0 on this measure would indicate that both content areas were, on average, presented in the same style. As apparent though, with the exception of three parties, non-EU topics are presented in a more engaging manner. In addition, we also see a negative correlation between this difference and the party EU positions: the more pro-EU the party is, the larger the negative differential for EU content. Overall this descriptive snapshot suggests that anti-EU candidates are equally engaging when it comes to different topics, but candidates of pro-EU parties are less engaging on EU issues.

For a more formal test, we extended the model by including a third level of hierarchy for parties, with a varying intercept of engaging style. We fitted this model to the pooled data

across all four countries and included a country control variable. Through these steps we account for cross-country differences in engaging style, but also for non-independence resulting from multiple candidates running under the same party banners. To test for systematic differences, we included the party EU position as a predictor and an interaction between EU position and EU content.

**Table 1:** EU position related differences

	Engaging
Intercept	-2.27(0.61)
EU content (=1)	-0.41(0.20)
EU position	0.10(0.09)
EU × position	-0.14(0.04)
Sitting MEP	-0.28(0.19)
Safe	-0.26(0.26)
Unpromising	-0.16(0.21)
Followers	0.31(0.14)
Greece	-1.46(0.40)
Spain	1.59(0.36)
UK	1.72(0.38)
$\sigma$ Intercept (politicians)	1.07(0.05)
$\sigma$ EU (politicians)	0.74(0.06)
$\rho$ (Int, EU)	-0.18(0.11)
$\sigma$ Intercept (parties)	0.53(0.16)
N	37234
Politicians	474
Parties	30

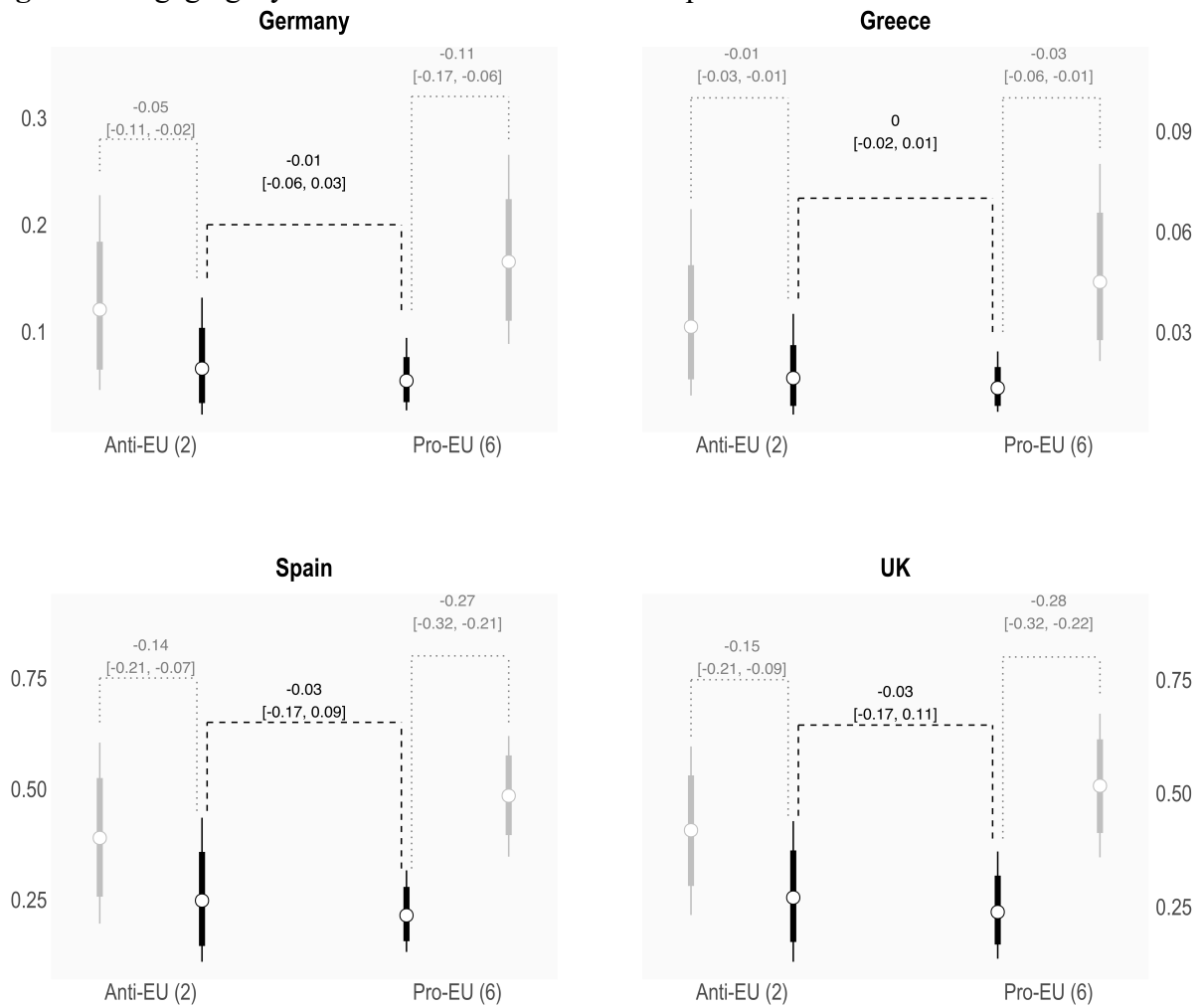
*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical binomial model parameter estimates (logit).

The substantive comparisons (Figure 2) indicate that content related differences are present on both sides of the EU position spectrum, but they are twice within the pro-EU block. However, they come with quite some uncertainty, thus some of these differences still overlap. In a similar vein, we cannot rule out no difference between candidates on the opposing sides of EU position, but they are in the expected direction. For non-EU content pro-EU party candidates are slightly more engaging than their anti-EU candidate counterparts, but this is not the case anymore for EU content. The main difficulty is related to the fact that we have EU position measurement at the party, rather than the politician or tweet level. We also have more candidates and tweets from pro-EU parties than from anti-EU parties.

Finally, there are important between country differences in how these parties are distributed in terms of EU position. Thus, as seen from our analysis as well, our data are insufficient to offer a conclusive statement in a multivariate setting about between candidate differences conditional on EU position. Nevertheless, results from three different approaches point towards the observation that pro-EU mainstream candidates are more engaging on non-EU topics compared to EU issues, when compared to anti-EU candidates.



**Figure 2: Engaging style for different content and EU position**



*Notes:* EU content colored black, non-EU content gray. Line ranges are 95% (thin) and 80% (thick) credible intervals. Median difference between predicted probabilities (EU - non-EU) with 95% credible intervals in parentheses with gray, holding EU position constant. Between EU position median difference for EU content (Pro-EU - Anti-EU) with black. Please note varying y - axes range used to facilitate clarity of display.

## 4.2 EU position differences: continuous measures

**Table 2:** Engaging (as dichotomous) with continuous EU predictor

	Germany	Greece	Spain	UK
Intercept	-1.93 (0.62)	-1.8 (1.3)	-0.12 (0.25)	-0.85 (0.4)
EU content [continuous]	-1.47 (0.29)	-1.33 (0.69)	-3.33 (0.23)	-1.56 (0.12)
Sitting MEP	-1.35 (0.67)	0.62 (0.79)	-1.01 (0.45)	-0.2 (0.26)
Safe	-0.05 (0.79)	-2.43 (1.6)	-0.41 (0.39)	0.2 (0.44)
Unpromising	0.12 (0.7)	-2.34 (1.36)	-0.48 (0.3)	0.27 (0.41)
Followers	1.51 (0.49)	1.8 (0.59)	0.08 (0.24)	0.07 (0.21)
Intercept SD	1.43 (0.2)	1.77 (0.28)	1.25 (0.08)	1.25 (0.08)
Slope SD	1.04 (0.27)	1.59 (0.77)	2.24 (0.26)	1.14 (0.12)
Correlation	0.03 (0.29)	-0.06 (0.35)	0.32 (0.1)	-0.07 (0.14)
N	5223	4892	18063	18490
Politicians	86	70	184	224

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical binomial model parameter estimates (logit). EU content is within candidate mean centred.

**Table 3:** Engaging (as continuous) with dichotomous EU predictor

	Germany	Greece	Spain	UK
Intercept	0.22 (0.04)	0.16 (0.06)	0.51 (0.03)	0.39 (0.05)
EU content	-0.06 (0.01)	-0.02 (0.01)	-0.22 (0.01)	-0.14 (0.01)
Sitting MEP	-0.04 (0.04)	-0.01 (0.03)	-0.07 (0.05)	-0.01 (0.03)
Safe	-0.01 (0.05)	-0.12 (0.07)	-0.02 (0.04)	0.03 (0.06)
Unpromising	0 (0.04)	-0.09 (0.06)	-0.06 (0.03)	0.04 (0.05)
Followers	0.07 (0.03)	0.05 (0.02)	-0.01 (0.03)	-0.01 (0.03)
Intercept SD	0.12 (0.01)	0.09 (0.01)	0.16 (0.01)	0.19 (0.01)
Slope SD	0.05 (0.01)	0.05 (0.01)	0.1 (0.01)	0.11 (0.01)
Correlation	-0.87 (0.09)	-0.85 (0.12)	-0.75 (0.06)	-0.56 (0.08)
Data	0.26 (0.01)	0.21 (0.01)	0.30 (0.01)	0.34 (0.01)
N	5223	4892	18063	18490
Politicians	86	70	184	224

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical Gaussian model parameter estimates.

**Table 4:** Engaging (as continuous) with continuous EU predictor

	Germany	Greece	Spain	UK
Intercept	0.2 (0.04)	0.14 (0.06)	0.49 (0.03)	0.35 (0.05)
EU content [continuous]	-0.11 (0.02)	-0.04 (0.02)	-0.34 (0.01)	-0.23 (0.02)
Sitting MEP	-0.04 (0.04)	0 (0.03)	-0.1 (0.05)	-0.02 (0.03)
Safe	-0.02 (0.05)	-0.1 (0.07)	-0.03 (0.04)	0.03 (0.06)
Unpromising	-0.01 (0.04)	-0.07 (0.06)	-0.07 (0.03)	0.04 (0.05)
Followers	0.06 (0.03)	0.04 (0.02)	-0.02 (0.03)	0 (0.03)
Intercept SD	0.11 (0.01)	0.09 (0.01)	0.16 (0.01)	0.18 (0.01)
Slope SD	0.1 (0.01)	0.08 (0.02)	0.15 (0.01)	0.16 (0.01)
Correlation	-0.78 (0.12)	-0.87 (0.1)	-0.6 (0.07)	-0.46 (0.09)
Data	0.26 (0.01)	0.21 (0.01)	0.30 (0.01)	0.34 (0.01)
N	5223	4892	18063	18490
Politicians	86	70	184	224

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical Gaussian model parameter estimates. EU content is within candidate mean centred.

**Table 5:** Pooled across countries

	Eng. dich, EU cont	Eng cont, EU dich	Eng cont, EU cont
Intercept	-2.24 (0.27)	0.28 (0.03)	0.22 (0.03)
EU content	-2.2 (0.11)	-0.14 (0.01)	-0.23 (0.01)
Sitting MEP	-0.48 (0.2)	-0.03 (0.02)	-0.03 (0.02)
Safe	-0.38 (0.27)	-0.02 (0.03)	-0.03 (0.03)
Unpromising	-0.19 (0.21)	-0.02 (0.02)	-0.02 (0.02)
Followers	0.44 (0.14)	0.02 (0.01)	0.02 (0.01)
Greece	-1.23 (0.28)	-0.13 (0.03)	-0.09 (0.03)
Spain	2.1 (0.22)	0.17 (0.02)	0.19 (0.02)
UK	1.84 (0.2)	0.17 (0.02)	0.19 (0.02)
Intercept SD	1.31 (0.06)	0.16 (0.01)	0.15 (0.01)
Slope SD	1.61 (0.11)	0.11 (0.01)	0.17 (0.01)
Correlation	0.23 (0.08)	-0.65 (0.05)	-0.53 (0.05)
Data	-	0.30 (0.01)	0.30 (0.01)
N	46668	466682	46668
Politicians	564	564	564

*Notes:* Posterior mean and standard deviation in (parentheses) of hierarchical Gaussian model parameter estimates/binomial for dichotomous Engaging. EU content is within candidate mean centred if continuous.