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The Adoption and Use of Twitter as a Representational Tool among Members of the European Parliament

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ABSTRACT

Members of the European Parliament (MEPs) struggle to connect with European publics. Few European Union (EU) citizens feel connected to their MEPs. Levels of turnout for European Parliament (EP) elections are low, and EU citizens rarely retain EPrelated news. For these and other reasons, we might expect MEPs to embrace social media platforms, like Twitter, that facilitate interactivity, spontaneity, personality, and informality. In reality, however, significant variation characterizes the timing and nature of MEPs' engagement with Twitter. In this article, we document and seek to explain elements of this variation. We examine five dimensions of MEP engagement with Twitter: Do MEPs establish Twitter accounts? Are they early adopters? How frequently do they tweet? And how, exactly, do they use Twitter - do they engage in direct conversations via Twitter's @-reply functionality and/or refer followers to other content via retweeting? We find that MEPs' approaches to Twitter are conditioned by specific personal, constituency-based, and structural/strategic variables. Our findings generate insights into the changing nature of political communication and the diverse patterns of political representation in today's EU.

KEYWORDS

Political communication; representation; European Parliament; social media

The European Parliament (EP), despite its status as the most recognized European Union (EU) institution (European Commission, 2014), struggles to communicate its mission and relevance to European citizens (Anderson & McLeod, 2004). Turnout for EP elections remains low (Mattila, 2003; Franklin & Hobolt, 2011; Hobolt, 2014), citizens tend to see EP elections as 'second-order' events (Schmitt, 2005; Hix & Marsh, 2007), and Europeans routinely fail to follow and recall EP-related news (European Commission, 2013).

For all of these reasons, one might expect Members of the European Parliament (MEPs) to embrace Twitter and other Web 2.0 technologies. Theoretically, these technologies could help MEPs to narrow representational gaps, to publicize their work to audiences that matter (e.g. national party elites, organizational supporters, and citizens at large), and to increase citizens' sense of political efficacy. While Twitter has become an

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increasingly mainstream tool of political campaigning and has been used by incumbent politicians across a wide range of national contexts, this paper begins with the observation that there is significant variation in the extent and nature of MEPs' Twitter use. We demonstrate this variation empirically and seek to determine the factors that drive variation in MEPs' Twitter adoption and use.

We expand existing insights on MEPs' Twitter use (e.g. Larsson, 2015) by throwing light on MEPs' Twitter adoption patterns, tweet frequency, and tweet quality. We examine why some MEPs are early adopters while others eschew Twitter altogether. We investigate why some MEPs tweet more than others, and we explore the nature of MEPs' published tweets, paying particular attention to @-replies and retweets. Politicians can use Twitter in at least two ways (Ausserhoffer & Maireder, 2013). They can use it to diffuse information – to *broadcast* details about activities, positions, and opinions. But they can also use Twitter to *interact* with interlocutors. Theoretically, both uses can promote deliberation and democratic deepening. We suggest below, however, that conversational interaction via Twitter is particularly important as a possible means of overcoming communication and democratic deficits.

In the following sections, we discuss the value and limitations of Twitter as a representational tool. We present intuitions about factors that might explain variation in Twitter adoption and use. After discussing data and methods, we present descriptive statistics and multivariate regression results. We argue that MEPs' personal characteristics (especially left status and youth), constituency characteristics (especially the technological level and degree of Twitter penetration of the member-state), and structural/strategic factors (including the electoral system and MEPs' sense of political threat) condition MEPs' engagement with Twitter. We conclude by discussing the implications of our findings and sketching possible future research trajectories.

Twitter: An Attractive Tool for MEPs?

Internet technologies expand the number of communicative channels available to candidates and representatives. On a given workday, legislators interact directly with colleagues, staffs, counterparts in other governing institutions, journalists, and a variety of societal stakeholders. In addition to their direct interactions, they oversee communications designed to reach diffuse mass audiences. To publicize their activities and positions, lawmakers have traditionally relied upon direct mail, e-mail, and intermediary institutions, including parties, the press, broadcast media, public relations firms, and civil societal organizations. To manage incoming communications, they have depended upon personal staffs and party organizations.

Web 1.0 technologies (e.g. candidate, party, and personal web pages) allow legislators to broadcast a consistent message and to archive and showcase their efforts (Adler et al., 1998). Web 2.0 technologies like Twitter and Facebook prioritize interactivity and enable more spontaneous exchanges between legislators and the public. Online tools rarely displace more established channels. Indeed, channels frequently feed off of each other: politicians' pithiest tweets, for example, are taken up by journalists, and the buzz generated by the press's coverage of tweets feeds back to affect interactions between legislators and their various face-to-face interlocutors.

Unlike Internet technologies that enable interventions of indeterminate length, Twitter imposes a 140-character limit. The limit makes deep dialogical exchanges unlikely, rendering long-form debates tedious and difficult-to-follow. And while Twitter users frequently fall into a banality trap – 'Thanks!', 'I agree', etc. – the character limit can also encourage a certain synthetic nimbleness or 'haiku effect'. The proliferation of virtual and hard-copy tweet compilations testifies to the character limit's muse-like role. In addition, Twitter's premium on spontaneity and immediacy can encourage conversational repartee and information exchange in a way that ultimately promotes deep thinking about public problems and/or more articulated debates in offline or more formally permissive online forums.

The character limit notwithstanding, Twitter is a flexible medium. Legislators can use Twitter to broadcast political activity (e.g. 'Meeting with EPP colleagues', 'My intervention on Mali at today's EP plenary'), to republish (retweet) content published by other users, to weigh in on trending debates via hashtags and hyperlinks, and more. The service's @-reply and retweet functions present MEPs with potentially valuable, if qualitatively distinctive, opportunities. Tweets that begin with @-username (@-replies) allow users to engage in direct conversations with followers. Theoretically, the @-reply functionality allows politicians to reply directly to constituents who ask questions or post comments; in this sense, @-replies are the most explicitly dialogical tool in the Twitter toolbox. While research on national legislatures suggests that politicians rarely use @-replies (Shogan, 2010), it is possible that attention-starved MEPs would find the functionality particularly attractive, as it allows them to indicate responsiveness.

The retweet is also an inherently responsive function; it allows MEPs to signal issues, causes, sources, and communities with which they (dis)agree. Users who frequently retweet, however, are not necessarily involved in dialogue with represented citizens. MEPs that frequently retweet 'Brussels bubble' content – by referring followers to the tweets of Commissioners and fellow MEPs, for example, or by recommending stories penned by Brussels-based journalists – may reinforce the EP's reputation as an isolated and/or irrelevant institution.

Qualitative differences notwithstanding, the characteristics that are often associated with Twitter – immediacy, interactivity, spontaneity, personality, informality – are congruent with a media zeitgeist that equates speed with quality. They are also likely to resonate with a Europe in which social mistrust is rising (Pharr et al., 2000; Dogan, 2005) and traditional institutions like political parties (Whiteley, 2011; Van Biezen et al., 2012; Van Biezen & Poguntke, 2014), religious organizations (Voas 2007, 2009; Burkimsher, 2014), and labor unions (Ebbinghaus, 2002; Van Biezen & Poguntke, 2014) are under threat. Twitter's defining characteristics contrast, at least superficially, with postwar 'politics as usual'. For these reasons, we might expect MEPs to flock to Twitter.

Perhaps the most important reason to expect widespread adoption and use, though, has to do with the relative invisibility of the EP and of particular MEPs in comparison with other political actors. As noted above, the EP is the EU's most widely recognized institution. Surveys consistently show that more citizens have heard of the EP than they have of the Commission, the Council, or the Court of Justice. Beyond such superficiality, though, the EP and its members struggle to showcase their relevance. A May 2014 poll in the UK, for example, revealed that only 11 per cent of voters were confident that they could name one of their MEPs; this contrasted with the 52 per cent of voters who thought they could

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name their (Westminster) MP and the 31 per cent that could name a local councilor (Coman & Helm, 2014). The personalization of the 2014 EP election campaign and the competition between the *Spitzenkandidaten* did little to stem the trend of falling EP voter turnout, and community-wide turnout remains lower than turnout for national elections in most member-states. Citizens struggle to retain EP-specific news (European Commission, 2013). The EP's continuing efforts to increase its visibility – through institutional social media efforts, an on-line television station, offices in the member-states, the Parliamentarium, the planned House of European History, etc. – have yet to achieve for the EP the kind of familiarity and recognition to which most MEPs aspire. MEPs' relative invisibility persists, of course, in spite of the EP's decades-long expansion of power (Rittberger, 2005; Corbett et al., 2011).

Despite Twitter's attractions, approximately one quarter (23.8 per cent) of current (2014–2019) MEPs have thus far decided not to establish a Twitter account. And the 76.2 per cent of MEPs who have established accounts use Twitter in very different ways. Why? The literature on other politicians' Twitter use provides a number of potential answers to this question. Existing literatures on Twitter use among EP candidates (Vergeer et al., 2011, 2013), Twitter use among sitting national legislators (Shogan, 2010; Chi & Yang, 2011; Peterson, 2012; Ausserhoffer & Maireder, 2013; Glassman et al., 2013; Larsson & Kalsnes, 2014) and digital communication adoption more broadly (Adler et al., 1998; Gibson & Römmele, 2001; Wei & Lo, 2006; Hargittai, 2007; Herrnson et al., 2007; Gibson & Ward, 2009; Chen, 2010; Williams & Gulati, 2010; Gulati & Williams, 2011) help to generate a number of alternative explanations of adoption and use patterns. In addition, Leston-Bandeira & Bender's (2013) analysis of the EP's institutional social media presence, and Larsson's (2015) exploration of MEPs' tweet frequency as of May 2013 provide useful foundations for analysis. In addition to bringing the scrutiny of Twitter behavior into the EP's eighth session (2014–2019), operationalizing dependent variables in a way that holds time constant for all MEPs, and specifying new models, our study takes up Larsson's calls (2015, p. 162) to scrutinize the quality of legislators' tweets (e.g. @-replies and retweets) and to expand the range of theoretically grounded independent variables that might affect MEPs' interfaces with Twitter.

Following the literature, we begin by distinguishing among three potentially important sets of characteristics – constituency characteristics, personal characteristics, and structural/strategic characteristics – that might affect the ways that MEPs use Twitter. In the context of the EP, *constituency-based* intuitions suggest that Twitter use will vary along national lines. There are different ideas, however, about which national factors might drive the variation. Multiple studies, for example, suggest that politicians from more technologically savvy constituencies will be more likely to adopt and use new technologies (Adler et al., 1998; Klotz, 2004; Chadwick, 2006; Herrnson et al., 2007; Peterson, 2012). Given the relatively strong correlation between district wealth and information and communications technology (ICT) savviness, Chadwick (2006) posits that legislators from wealthy districts will be more likely to adopt new technologies. A related idea has to do with how much a country's population uses Twitter. It is possible, for example, for a country to have high rates of IT penetration but low rates of Twitter usage. Thus, we might expect MEPs from countries where Twitter is not widely used to use Twitter less than MEPs from countries where Twitter is very popular.

Other strands in the literature suggest that a constituency's youthfulness may be more important than its level of wealth; legislators representing young constituents might use Twitter more than legislators from demographically old districts (Peterson, 2012). MEPs' Twitter behavior could also be driven by their respective national media landscapes. The exact nature of the relationship, however, is debatable. Insofar as studies (Williams & Gulati, 2010; Ausserhoffer & Maireder, 2013; Glassman et al., 2013) suggest that politicians are more likely to use 2.0 technologies to court press coverage than they are to directly engage citizens, one might expect MEPs from countries with strong independent media landscapes to tweet more. On the other hand, one might conjecture, based on the literature on social media in closed political systems (Shirky, 2011; Diamond & Plattner, 2012), that social media linkages can compensate for weaknesses in a country's broader media system. In other words, where official media are weak, subservient to the state, and/or poorly institutionalized, legislators might be more apt to exploit direct channels like Twitter.

Personal characteristics might also drive MEPs' Twitter behavior. Young age cohorts in developed countries are 'digital natives' who have never known a world without computers. They tend to have a stronger intuitive grasp of online technologies than the 'digital immigrants' of older cohorts. We might, therefore, expect younger MEPs to use Twitter more than older MEPs (Peterson, 2012; Bolton et al., 2013; Larsson, 2015). Gender may or may not affect MEPs interface with Twitter. Here, too, the scholarship points in multiple directions. Strands in the broader literature on ICT adoption suggest that women are more likely to embrace social media than men (Hargittai, 2007) and that women use new communications technologies more dialogically than men (Wei & Lo, 2006). But the more targeted literature on social media usage among parliamentary candidates and sitting legislators finds that men tend to use social media more than women (Vergeer et al., 2011; Ausserhoffer & Maireder, 2013).

An MEP's tenure might also influence her propensity to tweet. While few studies suggest that tenure strongly affects legislators' voting behavior (Urich, 1959), there is still reason to expect that 'new' legislators will be less integrated into governing networks and less able to gain respect than more seasoned peers (Peterson, 2012); an active Twitter feed might create buzz around inexperienced MEPs and help to compensate for some of these deficits.

Other potentially important personal characteristics involve partisan identification and parliamentary arithmetic. Studies of ICT adoption in the US Congress suggest that Republicans have been trailblazers (Gibson & Römmele, 2001; Shogan, 2010; Chi & Yang, 2011; Glassman et al., 2013). Vergeer et al. (2011) present a theoretical rationale for expecting the right to tweet more: insofar as ICT adoption is associated with corporate communications and 'business-like' political strategies, one might expect politicians of the right to tweet early and often. A theoretical intuition linking the left to social media is at least as plausible, however. Platforms like Twitter shrink the symbolic distance between representatives and represented, promote social dialogue, and give voice, at least theoretically, to populations traditionally excluded from power. A similar debate characterizes theorizing about whether members of dominant or subordinate (e.g. governing or opposition) political parties are more likely to 'go social'. Chen (2010) refers to this debate the 'normalization vs. equalization debate'. On the 'normalization' side, it can be argued that while it is very cheap to set up a Twitter account, it is more costly to sustain a 'Twitter presence'.

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MEPs from well-represented party groups might be disproportionately able to leverage the Twitter echo chamber by gaining followers in the press. And well-resourced party organizations might be more likely than poorly resourced peers to oversee coordinated and sophisticated social media communication strategies (Gibson & Ward, 2009; Vergeer et al., 2011). On the 'equalization' side, subordinate and opposition parties might use social media cut through the press's frequently bemoaned cover-the-leader bias (Cook, 1998; Gulati & Williams, 2011; Peterson, 2012; Ausserhoffer & Maireder, 2013). Finally, in the EP context, analysts have remarked on the discrepancy between highly cohesive party groups like the EPP and S&D and incohesive party groups like the EFDD. Cohesive party groups frequently vote together, and few group members dissent from the party group line; incohesive party groups have more dissenters and struggle to enforce group unity. Insofar as party (group) branding carries less weight for MEPs from more incohesive party groups and non-attached MEPs, we might expect such MEPs to use Twitter more.

The third set of factors involves *structural and strategic* characteristics. In the American context, Peterson (2012) finds that members of Congress who have won their seats by tight margins are more likely to use Twitter than members who have won by comfortable margins. 'Closer winners', he suggests, feel a more acute exit threat than those who have faced weak resistance in the recent past. In the EP context, we might expect members of parties whose victory margins have recently shrunk to feel a similar compulsion to connect.

Electoral institutions might also affect MEPs' relationships to Twitter. While all memberstates use some form of proportional representation for EP elections, there is evidence (Hix, 2004) that legislators elected in more candidate-centered PR variants (e.g. singletransferable vote, open-list PR) behave differently than legislators elected on closed lists. Although his empirical analysis of Australian, Canadian, and New Zealand legislators does not bear out the intuition, Chen (2010) nonetheless tests the notion that parliamentarians operating in personalized contexts might be more likely to utilize more personal channels like Twitter. Since MEPs are elected through a variety of systems, the EP context provides a strong opportunity to test this intuition.

Data and Methods

Our analysis involves scrutiny of MEPs' Twitter behavior in the early days of the eighth (2014–2019) EP session. After identifying the accounts associated with all MEPs, we used Twitter's User Timeline application programming interface (API) to capture all MEP tweets over a three-month span (1 September 2014 through 30 November 2014).¹ This API is subject to a number of limitations. First, it limits queries to 180 requests per 15 minutes, returning a maximum of 200 tweets per user. We overcame this limitation by issuing one request, every 15 minutes, for the 88-day study duration. If the response contained 200 tweets, a subsequent request was issued for the same MEP, adding a 'since_id' parameter, indicating the maximum tweet ID in the initial response. The process continued until a response with fewer than 200 tweets was received for a given MEP. Second, the User Timeline API returns up to 3200 of each queried user's most recent tweets. We overcame this limitation by initiating the study on the date that data collection began. Our

query produced a universe of 168,175 tweets. Each tweet is associated with a particular MEP, and our unit of analysis is the individual MEP.

Our statistical models include five dependent variables, which gauge the extent and nature of MEP Twitter use. First, we determine whether an MEP had a Twitter account as of 1 September 2014 (0 = no, 1 = yes). Second, we calculate the length of time, in days, that each MEP has had a Twitter account, again using 1 September 2014 as a cut-off. Third, we count the number of tweets published by each MEP over the 88-day observed period. Fourth, to gauge the extent to which MEPs use Twitter dialogically, count each MEP's @-replies. Fifth, we count retweets.

The indicators for our constituency-based independent variables are defined at the member-state level.² For *District technology*, we integrate the World Economic Forum's Global IT scores for 2014 (Bilbao-Osorio et al., 2014). For *District wealth*, we use 2013 Eurostat data on GDP per capita in purchasing power standards (Eurostat, 2014). Our *District Twitter rank* indicator is derived from Alexa's (2015) list of the 500 most-trafficked sites in each EU-28 country. Because Twitter.com ranks among the top 100 sites for each EU country, our indicator is calculated by subtracting Twitter's rank from 100; the calculated difference assures that countries where Twitter is more popular will have higher values. For *District age*, we use estimated median ages reported in the CIA World Factbook (Central Intelligence Agency, 2014), and for *District media freedom* we use the Reporters Without Borders World Press Freedom Index 2014 (Reporters Without Borders, 2014).

Our variables on *MEP age* and *MEP gender* come from the EP's website (www.europarl. eu). To determine *MEP tenure*, we calculate total days served as MEP as of 1 September 2014; the raw data for that calculation come from the EP Research Service. We construct a dichotomous indicator for *Left MEP*, coding MEPs from the Green-EFA, GUE-NGL, and S&D party groups as 'left' (1) and MEPs from the ECR, EPP, and EFDD party groups as 'right'.³ In addition, we code all non-attached MEPs according to the left-right ideology of their respective national parties (only three of 52 non-attached MEPs are coded 'left'). For *Minority MEP*, we code members from party groups that overwhelmingly supported the Juncker Commission (EPP, S&D, and ALDE) as 'governing' (0). We code as 'opposition' (a) members from groups that overwhelmingly rejected the Juncker Commission and (b) non-attached members. To test the notion that MEPs from less cohesive party groups will engage more with Twitter, we construct *Incohesive MEP*. This indicator subtracts the group's 2009–2014 cohesion score (Thillaye, 2014) from 100, assuring that MEPs from less cohesive groups have higher values. We code non-attached members as 'missing' for this measure.

For structural and strategic characteristics, our indicator for *Endangered MEP* subtracts the share of the 2014 EP vote won by an MEP's national party from the share of the 2009 EP vote won by that party; this value, which can be negative, derives from the EP's 2014 *Les élections européennes et nationales en chiffres* report (European Parliament, 2014). Finally, we construct *Electoral system* by assigning MEPs elected via closed-list PR '0', MEPs elected via PR with preferential voting '1', and MEPs elected via STV '2'.

All five of our models integrate the full set of independent variables. Because our first dependent variable is dichotomous, we use a logistic regression model. Since our other four dependent variables rely on counts, we employ negative binomial regression.

Table 1. N	1EPs on	Twitter
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ltem	Result	Corresponding MEP or count
Number of MEPs using Twitter	572	N/A
Earliest Twitter account subscriber	4 October 2007	Paolo DE CASTRO (S&D, IT)
Most recent Twitter account subscriber	25 July 2014	Jaromír ŠTĚTINA (EPP, CZ)
Mean date of Twitter subscription	1 August 2011	N/A
Minimum number of tweets per day	0	232
Highest tweet-per-day average	62.6	David COBURN (EFDD, UK)
Mean tweets per MEP (88-day period)	294	Martina DLABAJOVÁ (ALDE, CZ)
Median tweets per MEP (88-day period)	154.5	Guy VERHOFSTADT (ALDE, BE)

MEPs on Twitter: Descriptive Statistics

Tables 1–4 present descriptive statistics on MEPs' Twitter adoption and use; with the exception of the row in Table 1 that reports the mean date of Twitter subscription, all figures in the tables are calculated from among the full set of 751 MEPs. As Table 1 shows, 572 of 751 (76.2 per cent) of MEPs had established a Twitter account as of 1 September 2014. Among MEPs who have established accounts, there is significant variation in tweet frequency. The fact that 232 users average zero tweets per day over the observed span suggests that an additional 53 MEPs (7.1 per cent of all MEPs) have moribund accounts. These 'faux non-users' present a marked contrast with the EP's most active tweeter – UKIP's David Coburn, who publishes a staggering 62.6 tweets per day, on average – and a moderate contrast with the median MEP, who publishes 154.5 tweets over sampled period.

Tables 2 and 3 summarize tweet frequencies by party group and member-state. Table 2's left-right gradient is striking. The EFDD, whose median member tweets 1.8 times per day, is the exception to the rule that left MEPs tweet more than right MEPs. Also notable is the fact that the median non-attached member publishes zero tweets per day. The country-specific data reported in Table 3 suggest a northwest vs. southeast cleavage. Of the seven countries whose median MEP tweets zero times each day, five are in central and eastern Europe, and two (Greece and Portugal) are in southern Europe. There are a number of regional exceptions. Spanish, Slovenian, and Italian MEPs, for example, are all in the top third of the table. German MEPs stand out among MEPs from founding member-states. Along with the median Croatian, Polish, and Slovak MEP, the median German MEP publishes 0.1 tweets per day.

Previous studies have shown rather low levels of dialogical engagement among politicians, suggesting that legislators are more likely to 'broadcast' than to 'chat'. The data in Table 4 suggest that MEPs share a preference for broadcasting. Direct replies to users

Party group	Median number of tweets per MEP per day
Greens-European Free Alliance (Greens-EFA)	3.2
European United Left-Nordic Green Left (GUE-NGL)	2.0
Europe of Freedom and Direct Democracy (EFDD)	1.8
Alliance of Liberals and Democrats for Europe (ALDE)	1.3
Progressive Alliance of Socialists and Democrats (S&D)	1.2
European People's Party (EPP)	0.5
European Conservatives and Reformists (ECR)	0.4
Non-Inscrits (NI)	0.0

Table 2. MEPs' Twitter behavior by EP party group	Table 2.	MFPs'	Twitter	behavior	by F	p partv	aroup
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Member-state	Median number of tweets per MEP per day
Ireland	3.9
United Kingdom	3.4
Netherlands	3.4
Sweden	3.1
Spain	2.8
Slovenia	2.6
Finland	2.6
Italy	2.2
Austria	2.1
Malta	2.0
Denmark	1.9
France	1.3
Belgium	1.0
Latvia	0.9
Czech Republic	0.9
Cyprus	0.6
Luxembourg	0.4
Germany	0.1
Croatia	0.1
Poland	0.1
Slovakia	0.1
Greece	0.0
Estonia	0.0
Romania	0.0
Bulgaria	0.0
Hungary	0.0
Lithuania	0.0
Portugal	0.0

Table 3. MEPs' Twitter behavior by member-state

Table 4. MEP @-replies and retweets

ltem	Result	Corresponding MEP or count	
Minimum number of @-replies	0	340	
Maximum number of @-replies	1403	David COBURN (EFDD, UK)	
Mean number of @-replies	40.6	Dominique RIQUET (ALDE, FR)	
Median number of @-replies	5.0	15	
Minimum number of retweets	0	285	
Maximum number of retweets	3233	David COBURN (EFDD, UK)	
Mean number of retweets	128.5	Agnes JONGERIUS (S&D, NL)	
Median number of retweets	43.5	Maria ARENA (S&D, BE)	

are relatively rare: of the 168,175 tweets published in our sample period, only 23,220 (13.8 per cent) are @-replies. More than half of all MEPs (411, or 54 per cent) sent at least one @-reply over the course of these three months. But the median number of @-replies per MEP was only five. As in the case of overall activity, David Coburn (EFDD, UK) stands fore-most among the outliers; on average, almost 16 of his nearly 63 daily tweets are @-replies, Overall, however, MEPs have given a decidedly lukewarm embrace to a tool that facilitates direct engagement with interlocutors.

They have been more enthusiastic about retweeting. Of the total sample of 168,175 tweets, 73,475 (43.7 per cent) are retweets. This figure is higher than the frequency of @-replies (13.8 per cent), of course, but it is also higher than the frequency of tweets that is neither an @-reply nor a retweet (42.5 per cent). The median number of retweets is 43.5. The 466 MEPs who retweeted at least once in our period constitute 62.1 per cent of all MEPs, 81.5 per cent of MEPs who have established an account, and 90.0 per

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cent of MEPs on Twitter whose accounts are not moribund. As in the case of overall activity and @-replies, the most active retweeter is David Coburn; over half (58.7 per cent) of his tweets are retweets.

Overall, the descriptive statistics suggest that MEPs are using Twitter in very different ways, that left MEPs are more active than right MEPs, that MEPs from northwestern Europe are more active than their southern and eastern counterparts, that MEPs tend to favor broadcasting over conversation-making, and that the modal tweet coming out of the EP is a retweet. To what extent are these impressions robust to multivariate analysis, and to what extent do the data conform to the specific intuitions presented above?

Results

We report results of our multivariate models in Table 5; Model (1) includes data on all 751 MEPs; models (2) through (5) are restricted to the set of MEPs with Twitter accounts.⁴

District technology District wealth District Twitter rank	Dn Twitter Logistic (1) 0.445 (0.334) 0.017** (0.008) -0.012 (0.008) -0.123**	# days on Twitter Negative binomial (2) 0.196* (0.106) 0.003 (0.002) 0.008**	Total Tweets Negative binomial (3) 0.329 (0.185) 0.006	Total @-Replies Negative binomial (4) 0.736*** (0.232)	Total Retweets Negative binomial (5) 0.505** (0.229)
District wealth District Twitter rank	(0.334) 0.017** (0.008) -0.012 (0.008)	(0.106) 0.003 (0.002)	(0.185)	(0.232)	
District Twitter rank	0.017** (0.008) -0.012 (0.008)	-0.003 (0.002)	. ,	. ,	(0,220)
District Twitter rank	(0.008) -0.012 (0.008)	(0.002)	0.006		(0.229)
	-0.012 (0.008)			0.001	0.005
	(0.008)	0.008**	(0.004)	(0.005)	(0.005)
District age			-0.028***	-0.013	-0.049***
District age	-0.123**	(0.003)	(0.006)	(0.008)	(0.008)
5		0.034**	-0.045	-0.035	-0.013
	(0.050)	(0.016)	(0.028)	(0.035)	(0.034)
District press freedom	0.026	-0.0002	-0.015**	-0.021***	-0.013*
·	(0.021)	(0.009)	(0.016)	0.020)	(0.019)
MEP age -	-0.033***	-0.002	-0.015**	-0.021***	-0.013*
2	(0.009)	(0.003)	(0.006)	(0.008)	(0.007)
MEP gender	0.063	0.188***	0.060	0.120	0.060
5	(0.192)	(0.072)	(0.125)	(0.159)	(0.154)
MEP tenure 0	0.0002***	-0.00000	-0.00003	-0.0001	-0.00003
	(0.191)	(0.073)	(0.127)	(0.161)	(0.156)
Left MEP	0.438**	0.169**	0.239*	0.404**	0.281*
	(0.191)	(0.073)	(0.127)	(0.161)	(0.156)
Minority MEP	-0.168	-0.012	0.135	0.002	-0.014
,	(0.216)	(0.083)	(0.144)	(0.183)	(0.177)
Incohesive MEP	0.013	-0.002	0.011	0.022***	0.018**
	(0.009)	(0.004)	(0.006)	(0.008)	(0.008)
Endangered MEP	0.014	0.0001	0.010	0.018**	0.016**
5	(0.010)	(0.004)	(0.006)	(0.008)	(0.008)
Electoral system	0.871***	0.116	0.069	0.313*	-0.076
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(0.221)	(0.083)	(0.144)	(0.183)	(0.177)
Constant	3.846	4.049***	8.285***	3.133	7.041***
	(2.597)	0.998)	(1.732)	(2.197)	(2.127)
Observations	751	567	572	572	572
	-379.851	-4592.040	-3664.945	-2376.637	-2990.993
θ		1.510***	0.499***	0.313***	0.332***
		(0.082)	(0.027)	(0.018)	(0.018)
Akaike Inf. Crit.	787.701	9212.081	7357.891	4781.273	6009.985

Table 5. Factors affecting MEPs'	engagement with Twitter
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**p* < .1

p* < .05 *p* < .01 Across the models, the results for a number of the personal characteristic variables are particularly consistent. The leftward gradient that emerged in the descriptive analysis holds up in the multivariate models. Left MEPs are more likely than right MEPs to be on Twitter, to be earlier adopters, to tweet frequently, to engage dialogically, and to retweet. Similarly, MEP age matters. Age is negatively related to Twitter activity in all five models and reaches statistical significance in four of the five. Younger MEPs are not necessarily more likely to establish a Twitter presence before older MEPs. But the younger an MEP is, the more likely she is to have an account, to tweet frequently, to use @-replies, and to retweet.

Analysis of the other personal characteristics produces less straightforward results. The notion that MEPs from incohesive party groups are less encumbered by party overseers and more likely to prioritize the construction of a personal brand receives some support. Party group cohesion is not associated with Twitter adoption or the timing of Twitter account establishment but is positively related to total tweet activity, number of @-replies, and number of retweets. MEP gender is not a strong driver of Twitter activity. While the signs are positive in all models, the only model in which (female) gender reaches statistical significance is the number of days on Twitter. The women MEPs who decide to establish Twitter accounts generally do so before their male colleagues. Once they are on Twitter, however, there is no evidence that women and men behave differently. More tenured MEPs are more likely to have established Twitter accounts, and there is no evidence that being outside of the EPP/S&D/ALDE bloc is related to Twitter adoption or behavior.

Our findings on the relationship between constituency characteristics and MEP Twitter adoption and use are also mixed. Overall, they point to the robustness of the 'northwest vs. southeast' cleavage discussed above. The most consistent finding across the constituency variables is that MEPs from more technologically advanced countries use Twitter and its various functionalities differently than MEPs from countries at lower technological levels. District technology is not significant in 'On Twitter', 'Total Tweets', or 'Total Retweets' models (models 1, 3, and 5), but MEPs from member-states with high levels of IT penetration establish accounts earlier and post more @-replies than MEPs from member-states with lower technological levels. District wealth, on the other hand, is insignificant in all five models. Two other constituency variables – the popularity of Twitter, as such, and the median age of a country – are inconsistent across the models and challenge certain intuitions. MEPs from countries where Twitter is more popular are likely to join Twitter earlier – but to tweet and retweet less frequently – than MEPs from countries where Twitter is less popular. MEPs from countries with higher median ages are less likely to be on Twitter, but, assuming that they have established an account, more likely to have done so earlier than colleagues from member-states with lower median ages. Levels of press freedom are not associated with any of the dependent variables.

With respect to the two tested structural/strategic characteristics, there are a number of intriguing results. Comparative studies of Twitter use among national MPs have found little to no electoral system effect. The EP case complicates this finding while revealing different effects across the models. MEPs from countries that use some form of personalized PR are no more likely than MEPs from countries that use closed-list PR to adopt Twitter earlier, to tweet more, or to retweet more. Still, MEPs from personalized systems are more likely to have established an account and to engage with interlocutors via @-replies. The results

also suggest that more endangered MEPs are more likely to engage dialogically and to retweet than less endangered MEPs. This implies that MEPs in 'hotter seats' may attempt to cultivate on-line community in an effort to convince followers that they are serious about representing their interests and/or promoting substantive political dialogue.

Discussion and Conclusions

MEPs operate within one of the world's most dynamic legislatures. While their institution has gained power over the last 35 years, most MEPs still pine for visibility. They often fail to wrest the spotlight from national legislators. Twitter is one way that MEPs can fight against publicity, communications, and democratic deficits. Our analysis of the extent and nature of MEPs' Twitter use generates early insights into the ways that MEPs avail themselves of this opportunity. While over ³/₄ of MEPs have established an account, Twitter does not seem to have revolutionized MEPs' political communications. The median MEP tweets infrequently, prefers 'broadcasting' to 'chatting', and, insofar as she is active on Twitter, prefers retweets to other tweet varieties.

We hope that future research will generate more insights into overlaps and divergences between MEPs' Twitter behavior the Twitter behavior of members of national parliaments. We are loath to make direct comparisons, since our dates of coverage and methods of operationalization differ from those of other scholars. Still, there are interesting early signals of potential divergence: Larsson & Kalsnes (2014), for example, find the median Swedish MP tweets 0.95 times daily, while we find that the median Swedish MEP tweets 3.1 times daily. Future research should investigate the extent to which such differences are real and persistent and the extent to which MEPs' greater rates of usage (if corroborated) reflect a desire to increase MEP visibility vis-à-vis national MPs.

Our multivariate models allow us to see how specific personal, constituency-based, and structural/strategic factors affect MEPs' behaviors. With regard to personal characteristics, we find, consistently, that younger MEPs are well-represented in the EP Twittersphere. This finding echoes findings of many other researchers on social media in and outside of politics. We also find that ideology matters. In his study of Twitter use among US members of Congress, Peterson (2012) concludes that 'the large Republican effect on Twitter usage is the proverbial elephant in the room' (p. 437). In the Swedish and Norwegian national contexts, Larsson & Kalsnes (2014) find no association between ideology and Twitter behavior, and Larsson's (2015) analysis of MEP activity indices echoes this finding. Our time-sampled results from the EP differ from both of these findings: all five models point toward 'left leadership' on Twitter. With regard to differences between the EP context, on one hand, and various national contexts, on the other, institutional rules, partisan math, and/or candidate (re)selection mechanisms might drive differences; future research should examine these explanations with a more focused lens. With regard to MEPs themselves, we look forward to analyses that hone in on temporal considerations. To what extent are observed left-right patterns stable over time? Might politicians' tweet patterns fluctuate in tandem with the news cycle, with the right tweeting more during moments that align with traditional right-dominated issues (e.g. national security emergencies) and the left tweeting more during 'left-dominant' moments (e.g. moments that initiate debates about legal equality or public intervention)?

Our comparison of Twitter use by MEPs from different member-states can be compared to existing studies of politicians' Twitter use and to the broader literature on European media systems. Larsson (2015, p. 161) makes two relevant observations in this regard. First, he suggests a possible 'blurring of the ... North-South barrier'. Here, we agree. We find little support for the idea that a simple north-south barrier divides Europe: median Spanish and Italian MEPs are relatively prolific users, and median German and Belgian MEPs use Twitter very little. Twitter activity does not seem to be related, in any clear way, to broader characteristics of national media systems. Hallin & Mancini (2004), for example, differentiate among liberal, democratic corporatist, and polarized pluralist media systems. Ireland and the UK are the only two countries studied here that Hallin and Mancini would classify as liberal, and Irish and British MEPs are quite active on Twitter. With regard to the other two categories, though, results are inconsistent. The Netherlands (whose median MEP tweets 3.4 times each day) is a democratic corporatist country at the top of the table, while Germany (0.1) is a democratic corporatist country at the bottom. Likewise, Spain (polarized pluralist) sits near the top, while polarized pluralist Greece and Portugal sit near the bottom.

Larsson also suggests that Twitter activity might indicate a 'leapfrog effect', where politicians from some (predominantly eastern) new democracies embrace Web 2.0 technologies more wholeheartedly than those from more established (predominantly western) democracies. We find little support for this suggestion. Of the 13 countries that have joined the EU since 2004, only two (Slovenia and Malta) have median MEPs who use Twitter more than the full institution's median user, and 10 of the 11 countries whose median MEP tweets 0 or 0.1 times a day are newer democracies. These findings, in addition to our finding that district technology is positively associated with multiple aspects of Twitter use, underscore the idea that while it is too facile to posit a straight north–south divide, there does, nonetheless, seem to be a 'northwest–southeast gradient' in MEP Twitter habits. The most prolific median users come from Ireland, the Netherlands, the UK, and Sweden, and the least prolific median users come from Bulgaria, Estonia, Greece, Hungary, Lithuania, Portugal, and Romania.

While most MEPs are interested in increasing their visibility, furthering their political careers, and amplifying the voice of the public (or, at least, portions thereof), they do not uniformly approach Twitter as a means to these ends. Rather, MEPs' approach to Twitter is conditioned by personal, constituency-based, and structural/strategic factors, and no one set of factors plays a strongly determinative role. Overall, this analysis suggests, an MEP's approach to Twitter is most strongly influenced by her age and ideology; by the technological level, national Twitter penetration rate, and median age of the country she represents; and by the electoral system and immediate electoral context within which she operates.

As already noted, there is ample room for additional study of MEPs on social media. This paper has focused squarely on MEPs and their activities, leaving aside the questions of who is following MEPs and what happens to MEPs' tweets once they are published. Closer analysis of the size and structures of MEPs' Twitter networks and the afterlives of their tweets (e.g. through @-replies and retweets) would generate insight into the structure and dynamics of the European public sphere. We have shown that MEPs tend to operate in 'broadcast mode' and that they are comparatively keen on retweets. Future studies should scrutinize the characteristics of users to whom MEPs reply and users

whose content they retweet. As Larsson (2015) and others have suggested, Twitter is often seen as an 'elite' tool. Information about the users to whom MEPs reply and the originators of the content they retweet will yield insights into the extent to which they remain encased in the 'Brussels bubble'. Additional insight into the eliteness of the EP Twittersphere could be gained via systematic scrutiny of the languages in which MEPs tweet, which, in tandem with analyses of MEPs' networks (e.g. users who follow MEPs and users whom MEPs follow), would give a stronger sense of the cues to which MEPs respond and the audiences that they aspire to reach.

Our analysis of strategic factors has suggested that MEPs may take to Twitter in an effort to 'right a sinking ship', and, by extension, that Twitter activity might drop off once an MEP's party recovers. This point, like the one referenced above, underscores the potential importance of timing and rhythms of Twitter activity. Does MEP tweet activity follow the EU's rhythms? Does tweet frequency spike during plenary weeks, during European Council summits, or during weeks of heavy committee activity? Or do MEPs march to distinct national beats – do Danish MEPs, for example, tweet particularly furiously in the run up to Danish national elections? Answers to these kinds of questions will illuminate the nature of Europe's multi-level polity and the distinctive models of representation and communication that distinguish MEPs from national politicians.

Beyond the many research avenues that would effectively treat tweets as dependent variables, there is also value to be gained by investigating the possible effects of Twitter use. Does David Coburn's Twitter hyperactivity increase voters' familiarity with him? Does it increase citizen knowledge of the EP and/or the EU? Does it trigger more active engagement with other MEPs? With other EU institutions? With national politics? These are but a few of the issues that deserve future attention.

Notes

- 1. Social media researchers face tradeoffs when deciding how to treat time. Some (e.g. Larsson, 2015) create activity indexes. These indexes standardize timeframes that vary widely by user. With indexes, the researcher chooses a uniform cut-off date, applies that date to all users, and determines each user's index by dividing the total number of tweets published between adoption and cut-off by the total number of days elapsed between adoption and cut-off. This approach maximizes access to individual tweet histories but risks cross-user comparability. Due to its incorporation of multiple adoption dates, one user does not necessarily live through the same events as another user. Like other researchers (who generally use timeframes ranging from one to two months), we use an alternative, 'shared-time' approach that aims to maximize comparability by assuring that all users are living in the same world, shaping and responding to similar events. The EP's multinational character challenges perfect temporal comparability. Between September and December 2014, for example, Sweden, Latvia, and Bulgaria held general elections. This fact may have affected the quantity or quality of tweets from those countries' MEPs. Indexes do not necessarily avoid such issues, either, since they incorporate very different adoption dates. We look forward to more research on the treatment of time and rhythm in studies of legislators' social media behavior.
- At present, six countries (Belgium, France, Ireland, Italy, Poland, and the UK) divide their territory into multiple constituencies for EP elections. While there is evidence that their decision to do so might affect the relationships between MEPs and constituents (Bowler & Farrell, 1993; Hix, 2004), most of our indicators are available only at the country level.

- We code ALDE as 'left' since the party group has traditionally championed the social principles transparency, openness, and the centrality of citizen participation – upon which the intuition that 'the left will use Twitter more' relies.
- 4. The only exception is model (2), whose N is 567; we were unable to identify the date that 5 users established Twitter accounts.

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