Who is leading the campaign charts? Comparing individual popularity on old and new media

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Paper prepared for the ICA Conference, 2015

Work in progress

Abstract

Traditionally, election campaigns are won in the mass media. Candidates' best bet, then, used to be to aim for getting attention through these traditional media outlets. The question of this paper is whether this knowledge still holds today, when social media outlets are becoming more popular. Do candidates who dominate the traditional media also dominate the social media? Or can candidates make up for a lack of mass media coverage by attracting attention on Twitter? This paper aims to answer this question by paring Twitter data with traditional media data for the 2014 Belgian elections. Our findings show that the two platforms are indeed related and that candidates with a prominent position in the media are generally also most successful on Twitter. This is not because more popularity on Twitter translates directly into more traditional media coverage, but mainly because a small political elite dominates both platforms.

Key words: News, Internet, Campaigns, Twitter, Quantitative - Content Analysis

Introduction

Traditionally, election campaigns are won in the mass media. Candidates that can attract plenty of journalistic attention and appear most on television and in newspapers are mostly also those that perform well on Election Day. Candidates' best bet, then, always used to be to aim for getting attention through these mass media outlets. The central query of this paper is whether this knowledge still holds to this day, when social media outlets are becoming ever more popular. Are candidates who are more active on social media also the ones that lead the traditional media charts? Or do we witness rather a tradeoff, in which candidates that invest more in digital campaigning are less prominent in the mass media? We test these conflicting hypotheses using data from the 2014 Belgian election campaign. We compare the attention of a large number of individual candidate in the traditional news media (represented here by newspapers) to their activities and popularity on Twitter. In this way, we pair Twitter data with traditional media data, hence, take a "multi-platform" approach. In doing so, we meet one of the current shortcomings of social media research, which is precisely the lack of understanding of the multi-media ecology of information flows (Tufekci, 2014).

First we will discuss the recent literature on the role of old and new media in (personal) election campaigns. Since the relationship between traditional mass media and social media has seldom been studied we formulate research questions instead of hypotheses. Next, we will present our research design and the main results. Although we are careful with making causal inferences, our study shows that being successful in newspaper and on Twitter is strongly, but far from perfectly, correlated. Those candidates with the most mass media attention are generally also the ones who are most popular and successful in reaching out on Twitter. It is especially a small political elite of party leaders and ministers, which is able to dominate both the traditional and new media chart. At the same time we see that being very active on Twitter does not improve your media visibility. We will elaborate on these findings in the discussion section and suggest pathways for further research.

Theory and Research Questions

Defining twitter use

Because of their potential impact on knowledge, attitudes, and behaviour of voters, election campaigns are a central topic of research in political communication. In particular, the role of the mass media has always been a prominent aspect of these studies. The media are generally considered as a key arena to reach out to voters and improve electoral support (e.g., Druckman, 2005; Holbrook, 1996; Hopmann, Vliegenthart, De Vreese, & Albæk, 2010; Norris, Curtice, Sanders,

Scammell, & Semetko, 1999). During the last fifteen years the so-called new or digital media have gradually been included in theoretical models of campaigning (Norris, 2002; Foot & Schneider, 2006; Gibson & Cantijoch, 2011). Websites, blogs and email offer parties and candidates new opportunities to reach out and interact with voters. More recently, scholarly attention shifted to the so-called social media or web campaigning 2.0 (Gibson, Römmele, & Williamson, 2014; Lilleker et al., 2011).

Online social media represent a radical break with other media. Social network sites can be considered as "networked publics" in which citizens, politicians, and journalists alike are present (boyd, 2011). Four structural affordances are useful to illustrate the break between social media and traditional mass media. First, persistency on these social network sites is high, which means that online behavior is enduring by nature. The archiving of one's behavior, in turn, allows the quantification of one's actions. Second, the information obtained through social media is easily replicable ('shareable'), thereby increasing the circulation of content. Third, the affordance of scalability implies a potential visibility of both users and expressions, which is contingent on what kind of content the network is programmed to amplify. Last, content on social media is easy to search and retrieve.

We take these structural affordances as our starting point to understand how the Twitter platform and its structural characteristics shape user activity and position in the communication network. Since its launch in 2006, Twitter has evolved to a web-based service that "*allows users to maintain a public web-based asynchronous "conversation" through the use of the 140-character messages.*" (Murthy, 2013: 1-2). This description highlights the public nature of Twitter communication. In addition, the focus on news and media events emphasizes its connection with the broader public debate, which has traditionally been shaped by the mass media.

As with other social media sites, Twitter features persistency in that it records all user activities and in turn allows for their quantification. An example of this is the 'trending topics' section, which algorithmically ranks hashtags and 'popular' keywords on a real-time basis. This requires that user behavior, such as writing, favoriting or retweeting a tweet, is 'datafied' – which entails a quantification of these activities (van Dijck & Poell, 2013). The same mechanism holds for users' outgoing (e.g. replies sent) and incoming (e.g. mentions received) activity, which can be quantified and understood in a comparable manner exactly because they are datafied.

These metrics of behavior, in turn, imply that we have a quantitative indication of users' respective role and importance within a particular discourse or conversation (Ausserhofer & Maireder, 2013:

302). Here, we conceptualize how each of the specific user behavior types on Twitter (i.e. mentions, retweets, favorites and follows) provide an indication of users' relevance in the network:

- **Mentions** are part of the micro layer of communication on Twitter, reflecting interpersonal communication between users (Bruns & Moe, 2014). Using the "@username"-expression within a tweet, one can address specific other users, regardless if there exists a follower-followee connection or not. Mentions are both *conversational*, as well as *referential* markers. As a conversational marker, it can be used to join in the 'chain of replies' to another's tweet. As a referential marker, it can be used to refer to another user, using his/her Twitter username (e.g. "I will vote for @politicianX tomorrow" (Bruns & Moe, 2014; Honeycutt & Herring, 2009). In both cases, they increase the user's visibility, can attract additional followers and amplifies (i.e. "rescales") the user's impact in the network.
- **Retweets** can be used by users to share, or reproduce, existing content, and thereby contribute to the visibility of other users (and their tweets) in the network. Incoming retweets are argued to reflect users' role as sources of information (Bruns & Stieglitz, 2014). More than is the case with replies or mentions, retweets have the potential to go beyond the user's follower network. Witty and sharply formulated political tweets, for example, have a great potential of spreading around the network (Parmelee & Bichard, 2012).
- **Favorites** are the least documented Twitter feature in extant literature. Their meaning is ambivalent, as a favorite can not only be interpreted to signify agreement with the tweet, but it may also be used in other ways, for example as a bookmark. When used as a bookmark, it adds to the retrievability of Twitter content. Also, since tweets that are favorited by people you follow are currently displayed in the "Discovery" tab of Twitter, the favorite function also complies with the shareability and scalability affordances of the social network.
- **Followers** are a user's subscribers. Follower networks are key determinants in the flow of information on Twitter, as these reflect the user's primary audience (Bruns & Stieglitz, 2014). As following is not necessarily reciprocal, it can be interpreted as a Twitter "currency". Compared to the metrics above, which apply to specific Twitter messages, we understand followers as a more enduring user metric. Often, famous politicians can reach the largest crowd on Twitter. In Belgium, Elio Di Rupo (Belgian prime minister from 2011 to 2014) is amongst the top Twitter users.[1]

[1] B.V.L.G. Top users in Belgium in 2013. http://bvlg.blogspot.be/2013/04/top-twitters-users-uit-belgie.html

Thus, we can say that all of the Twitter properties discussed above fit in boyd's (2011) conceptualization of social network affordances. Moreover, each of these quantified metrics provides the possibility of evaluating, comparing and ranking tweets (and by extension, Twitter users as well). It is clear that the relative importance of the metrics is hard to quantify. For instance, one cannot compute exactly how the value of a favorite relates to that of a retweet. In addition, the metrics are interrelated and reinforce one another via a complex interplay of user actions and algorithmic processes. The latter enhances the asymmetrical nature of content distribution (and popularity), as a few messages receive a lot of attention and most remain unnoticed (Baym, 2013; Klinger & Svensson, 2014). Nevertheless, the discussion here also clarifies that a higher score on any of the metrics attests to a higher importance of both tweet and user.

To conclude, we summarize Twitter metrics and distinguish between metrics as behavior (i.e. *activity*) and metrics as popularity. Concerning the latter, we distinguish between *personal popularity* (i.e. mentions) and *message popularity* (i.e. retweets and favorites). In addition, followers define the user's overall popularity on the platform.

Social media: between promise and reality

In theory, networking technologies allow for a "politics of non-representation", as communication with the electorate can occur unmediated by traditional mass media (Fenton, 2012). On Twitter, currently every published tweet appears in all timelines of people who follow its sender. Thus, compared to the traditional media, politicians can be argued to be more autonomous in their means of communication, which in turn can be translated in political autonomy. While the characteristics of social media may be asserted to up the potential of a more egalitarian political landscape, empirical evidence seems to temper any high expectations. Results from previous studies seem to be in favor of the 'normalization hypothesis', which entails that political actors who are already powerful offline, also tend to dominate the Twitter sphere (Jungherr, 2014; Sellers & Schaffner, 2007; Tresch, 2009).

Nonetheless, exceptions have been found, which provide alternative evidence for the role of Twitter and its impact on the political debate. In Germany for example, the non-establishment Pirate Party obtained a sustainable position in the debate on social media (Jungherr, Jürgens, & Schoen, 2012). In a similar manner, in the Netherlands, candidates of opposition parties were somewhat more active on Twitter and had a larger follower base (Vergeer, Hermans, & Sams, 2011). In addition, some positive (albeit limited) effects of Twitter use on the number of votes have been found (Gibson & McAllister, 2014; Jacobs & Spierings, 2014; Kruikemeier, 2014). In this way, the social network offers some counter-balance to the role of traditional mass media, which provide mainly access to already-

powerful actors. Does the normalization hypothesis hold or do we see that Twitter is indeed a separate platform, which offers new opportunities for other political actors to get in the news?

Twitter's dependence on traditional media is widely acknowledged. In particular, Twitter is studied as a "refraction chamber" (Rieder, 2012) as it alters *existing* news and information flows. In a similar manner, Twitter is understood as a "backchannel" (e.g. Kalsnes, Krumsvik, & Storsul, 2014) because the volume and content of Twitter messages follow media events, and televised debates in particular. More specifically, research found that politicians comment news and issues discussed in traditional media (Enli & Skogerbø, 2013) or respond to criticism uttered in traditional news outlets. In this respect, the platform is understood as "reactive" to mainstream media content and flows, rather than an "alternative" to the existing communication channels. Nonetheless, the vast majority of the studies on political uses of Twitter (and campaigns in particular) focus on one platform, i.e. Twitter and more specifically the content of the messages and the use of the Twitter conventions such as @replies (Graham, Jackson, & Broersma, 2014; Jungherr, 2014).

In this study, we take a holistic approach in two ways. First, we consider the role of both passive (incoming) and active (outgoing) social media affordances that are embedded within the Twitter architecture. We will test whether our conceptualization of different forms of Twitters behavior (followers, activity and popularity) is supported by our data. Second, we move beyond the single focus on either traditional mass media or social media and consider them both together. More specifically, we study to what extent popularity and activity on Twitter is related to attention in traditional media. Do traditional and emerging media have similar or diverse elites? We aim to find out how these different spheres interact with one another, and also we ask whether the patterns that have been found in previous studies (namely, that social media tend to be dominated by already-powerful actors) still hold when using a more holistic approach. These questions are considered within an election context.

Our research questions are formulated as follows:

> **RQ1:** Can we empirically distinguish different kinds of behavior on Twitter?
>
> **RQ2:** Does Twitter 'flatten' the political landscape and give more equal opportunities to all candidates?
>
> **RQ3:** How do mass media attention, Twitter activity, and Twitter popularity interplay?

Research Design

To study the relationship between Twitter popularity and traditional media attention, we rely on Twitter data from political candidates and their appearance in the newspapers in the advent of the 2014 elections in Belgium. On 25 May, three elections were held simultaneously on different electoral levels (regional, federal and European). Data from Twitter and newspapers were collected in the month before the election, from 24 April 2014 to 24 May 2014. In addition, we conducted a candidate survey to gather data on other characteristics, such as age, gender, nationality, political mandates, position on the ballot list and party membership.

Our sample is restricted to the candidates that are electable in Flanders (the Dutch-speaking part of Belgium, reflecting 60% of the population in Belgium). In total, 1519 Flemish politicians participated in all three elections.[2] Of these candidates, 955 completed our survey (63%). 492 also had a Twitter account. In the end, we were able to retrieve in-depth Twitter data for 323 candidates. We will conduct our analyses on this sample of candidates with a Twitter account).

For the collection of the Twitter data we relied on the open-source tool *yourTwapperkeeper* which is commonly used within social sciences (for a detailed overview of this tool, see Bruns & Liang, 2012). For each candidate, an archive was set up which captured tweets from and to that particular user.[3] As the Twitter API is the only entry point to the data, there is no base for comparison and therefore there are no guarantees for a comprehensive dataset (Highfield, Harrington, & Bruns, 2013).

As stated earlier we distinguish between different aspects of Twitter use: (1) Twitter *activity*, (2) *followers*, and (3) Twitter *popularity,* which may consist of two sub-dimensions. Twitter *activity* is measured by the number of tweets and replies the candidate sent during the campaign. This measure does not include retweets as they reflect the redistribution of existing content rather than the production of original content. For the second aspect of Twitter we take into account the number of *followers* the candidate had on 24 April 2014, the beginning of our data collection period. Finally, Twitter *popularity* consists of message popularity and personal popularity. Message popularity reflects the number of favorites and retweets one receives, whereas personal popularity reflects the number of replies and mentions one receives. In the result section, we provide an overview of the

[2] These are the effective candidates. Belgium also knows a system of successors, candidates who cannot get elected directly into parliament, but who gets a seat if any of the effective candidates takes up a mandate. As these successors cannot directly get elected into parliament we excluded them from the analysis.

[3] *yourTwapperkeeper* (Available at: http://github.com/jobrieniii/yourTwapperKeeper) is based on the Twitter streaming API, through which keywords can be "tracked". Aside the "track" parameter (which captures activity *to* a particular user), we also included the "follow" parameter to get Twitter activity *from* that particular user (For more information: https://dev.twitter.com/docs/streaming-apis/parameters#follow).

interrelation between the different sub-dimensions, and investigate whether we can indeed empirically discriminate them as separate dimensions or whether they form one measure of Twitter popularity.

Attention in traditional media was captured using the Belgian search engine Gopress, which contains all Belgian newspapers. For each of the candidates, we counted and checked the number of articles in which he or she was mentioned during the campaign (between April 24 and May 24). In total, we included eight paid Flemish newspapers[4] and the free newspaper *Metro*.

Table 1 summarizes the variables used in our model and provides descriptive statistics. The first section of variables reflects attention in traditional media, activity and popularity on Twitter as well as the number of Twitter followers. We already notice that the standard deviations for these variables are very high, which indicates a lot of variety between the different candidates. The second section of variables contains socio-demographics and political background characteristics.

Table 1: Descriptive statistics of variables used in analysis

Variable name	**Mean (S.E)**	**Freq (%)**
Media attention	8.27(46.1)	
Twitter activity	20.73(57.7)	
Twitter popularity	255.06(768.9)	
- *Personal popularity*	112.63(333.4)	
- *Message popularity*	142.43(459.1)	
Followers	1581.76(4461.0)	
Age	42.98(11.9)	
Gender		
- Male		345(55.2%)
- Female		280(44.8%)
Political mandate		
- Yes		204(32.6%)
- No		421(67.4%)
Nationality		
- Belgian or European		584(93.4%)
- *Non-European*		41(6.6%)
Verkiezingstype		
- Flemish		328(52.5%)
- Federal		272(43.5%)
- European		25(4.0%)
Politieke partij		
- N-VA		90(14.4%)
- CD&V		90(14.4%)
- Groen		122(19.5%)

[4] These newspapers are the broadsheets *De Morgen, De Standaard* and *De Tijd*, the popular papers *Het Laatste Nieuws* and *Het Nieuwsblad*, and the more regional oriented papers *Het belang van Limburg, de krant van West-Vlaanderen* and *De Gazet van Antwerpen.*

- Sp.a	89(14.2%)
- VB	58 (9.3%)
- VLD	91(14.6%)
- PVDA	85(13.6%)

Results

The first section of the results is aimed at getting insight in the data structure. In particular we look at the interrelations between the different variables and the distribution of the variables.

In Table 2 below, we present a principal component analysis to test which dimensions of Twitter behaviour we can distinguish. The analysis indicates that there are two separate dimensions. First of all we find that, as we already expected, sending tweets and sending replies both load on one component. This component/dimension is labelled Twitter *activity*. Additionally, the analysis shows that we cannot separate two sub-dimensions of Twitter popularity (message popularity and personal popularity). Instead the four different indicators all strongly load on only one factor, with factor loadings of .90 and higher. Also if we compose one single scale out of these four indicators, we find a high Cronbach's alpha of .9. Thus, although we acknowledge that personal popularity and message popularity in theory reflect two different dimension of Twitter popularity, empirically, they are highly interrelated. In our further analyses we will therefore combine these measures to one index of Twitter popularity.

Table 2: The factor loadings of the different Twitter metrics

	Component 1	Component 2
Tweets send	.873	.338
Replies send	.962	.056
Retweets received	.124	.961
Favorites received	.237	.931
Replies received	.348	.905
Mentions received	.083	.927

Before we investigate the relationship between the coverage in the traditional media and the new social media, it is useful to first look at these platforms separately. Concerning media attention, we recall the descriptives in Table 1 which showed that candidates appear in eight newspaper articles on

average. As the standard deviation (46.1) already suggests, the distribution is very skewed. In table 3, below, we provide a more in-depth overview of the distribution of media attention. The table shows that close to 53% of the candidates did not receive any attention and 38% of the candidates were mentioned in 10 or less articles. In contrast, there is a very small group of candidates that were mentioned in more than 50 articles. For example, Bart de Wever, party leader of the Flemish nationalists N-VA and overall winner of the elections, was covered in almost 800 articles during our research period. Thus, during the election campaign, traditional media gave voice to a very select group of candidates, whereas the larger part of the candidates received very little to no attention at all.

Table 3: Overview of media attention per candidate

Number of articles	Frequency (%)
0	52.8%
1-10	38.2%
11-20	3.4%
21-50	1.9%
51-100	2.1%
>100	1.6%

As argued in the theoretical part of the paper, optimism has been uttered about the potential of social media to include more voices in the debate. In comparison to traditional media, everyone has access to Twitter. Nevertheless, in Belgium, nearly half of the candidates (i.e. 48%) has no Twitter account. Concerning the political candidates that do have a Twitter account (*N*=323), there is great variation between activity, popularity and the number of followers the candidates have (see Table 4 below).

When we focus on the candidates with a Twitter account we see that 13% of them did not sent any tweets in the advent to the election. Moreover, a large group of candidates sent a very limited number of tweets. Only a small group was very actively using Twitter to broadcast their messages. Thus, in the light of the high percentage of candidates without a Twitter account, and considering that many of the candidates with an account barely sent tweets, we can conclude that only a small group fully embraced Twitter's functionality.

When we look at Twitter popularity, we notice that only one candidate out of ten did not receive any attention on Twitter. This is very different from traditional media attention, as 53% of the candidates did not receive any attention in the newspaper. Hence, if one has a Twitter account, it is very likely that one will receive at least some attention from the other users in the form of replies, mentions, retweets or favorites. However, it seems that most of the candidates received up to 50 retweets,

favorites, replies or mentions and a very small number of candidates (about 7%) receives over a 1000 of these. Thus, like media attention, Twitter popularity is skewed and only a small elite of candidates are very popular on Twitter.

For follower count, we notice similarities with Twitter activity and popularity in the sense that most of the candidates have a limited number of followers and a small number of candidates have a lot of followers. As shown in Table 4, almost 44% of these candidates have less than 200 followers, while there is a small group of candidates (about 4%) who have 10000 or more followers.

Table 4: Twitter activity, popularity and follower count

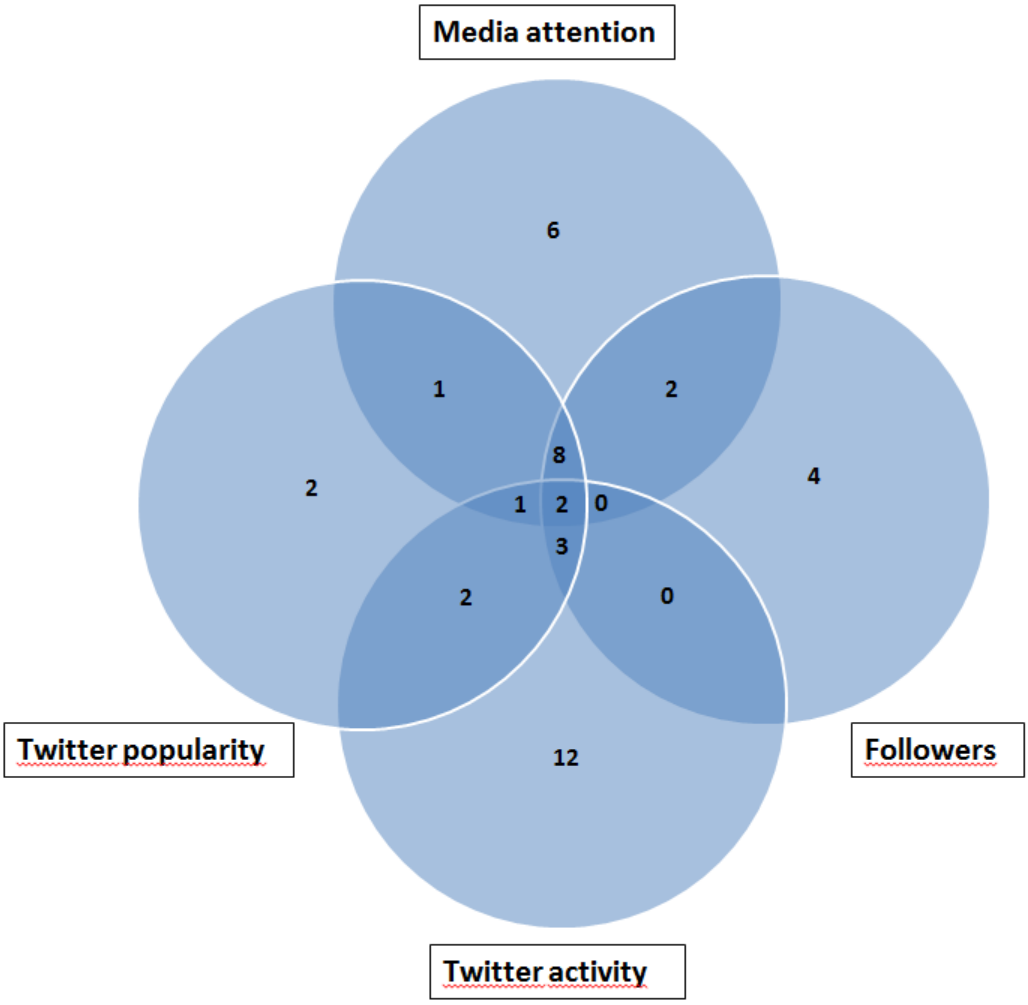
Activity	% Candidates	Popularity	% Candidates	Follower count	% Candidates
0	13.3%	0	9,6%	0-100	25.4%
1-10	29.4%	1-50	48,3%	101-200	18.3%
11-20	14.9%	51-100	14,9%	201-300	9.9%
21-30	9.3%	101-150	4,3%	301-400	8.6%
31-40	5.9%	151-200	4,0%	401-500	4.9%
41-50	4.3%	201-300	3,7%	501-750	6.2%
51-60	5.6%	301-400	1,9%	751 -1000	4.3%
61-70	1.9%	401-1000	6,2%	1001-2500	8.3%
71-100	5.3%	1001-2000	4,3%	2501-5000	6.2%
101-200	7.1%	>2000	2,8%	5001-10000	4.3%
>200	3.1%			>10000	3.7%

In appendix A, we plotted Twitter activity, popularity and media attention in newspapers as relative measures. The three different curves show that Twitter popularity is slightly less skewed than attention in newspapers.[5] Yet, even though Twitter might be a slightly more egalitarian platform, the descriptives show that both Twitter and the traditional media are dominated by a select group of political actors. The question remains to what extent Twitter and newspapers produce the same political elites. To get a first insight in the overlap between the different platforms, we map out the top 20 candidates in terms of (1) media attention, (2) followers, (3) Twitter activity and (4) Twitter popularity. Appendix B provides an overview of the names of the different candidates.

Figure 1 shows the visual overlap between the four above mentioned measures. The number of candidates per diagram and union is presented in the figure.

[5] More exactly, the skewness measure of media attention is about 13, while the three Twitter aspects all score around 6. A score of higher than 1 indicates that the distribution is skewed.

Figure 1: An overview of the overlap of the top 20 for each measure.[6]



In general, we notice that only two candidates score high on all the measures. This indicates that not all the measures are interrelated in an equal manner. In addition, Twitter popularity and followers seem to match with media attention (i.e. eight candidates) rather than Twitter activity (i.e. three candidates). 12 of the 20 most active users are not present in any other top-20. Thus, activity is fairly unrelated to popularity on Twitter and in extension media attention, whereas Twitter popularity and followers are. In this respect, active use of Twitter does not necessarily translate in popularity on Twitter or attention in the newspapers. Summing up, figure 1 shows that most of the candidates who dominate the traditional media charts, also belong to the most popular politicians on Twitter and have a high number of followers, although they are not necessarily the most active users.

While a focus on the top candidates is useful, we get a more systematic idea of the relationship between the traditional and the new media if we take all candidates into account. In Table 5 below,

[6] There is also on candidate who belongs to the top 20 of both Twitter popularity and Followers, but the figure is not able to depict this field.

we include the whole sample of candidates and calculate the correlations between the measures as provided in Figure 1. The table shows a relatively strong relationship between media attention and the number of followers. In addition, we find a significant correlation between media attention and Twitter popularity. Yet, contrary to what we would expect from figure 1, the strength of it the relation is only moderate. Table 5 also shows that the correlation between activity and media attention is significant yet weak, indicating that activity is not enough to get media attention. Finally, when we look at the correlations between the different Twitter measures we see a strong correlation between the number of followers and Twitter popularity and also between Twitter activity and Twitter popularity. The latter is not surprising, as candidates who send more tweets will also receive more retweets.

Table 5: Correlation matrix between media attention and twitter aspects. All variables are log transformed (N=323).

	Media-attention	**Twitter Activity**	**Followers**	**Twitter popularity**
Media-attention	1.00**	.231**	.630**	.471**
Twitter Activity		1.00**	.529**	.776**
Followers			1.00**	.746**
Twitter popularity				1.00**

* p<.05, ** p<.01

Based on the correlation matrix and the top 20 our first results are mixed. The top 20's indicate that those candidates who receive the most media attention are also the most popular on the social media, although not necessarily the most active. Yet, this relation is significant but moderate when we take all candidates into account.

For a more stringent test on the relation between the traditional and the new media, we run a number of regressions with media attention as dependent variable and the Twitter measures as independent variables. The regression analysis enables us to control for other factors which potentially influence the relation between the traditional media and Twitter (e.g. socio-demos and party membership). As our data are not longitudinal, and therefore cannot know whether Twitter popularity influences media attention or vice versa, we do not claim to make any causal inferences based on the regression models we present below. We choose to present the model with media attention as the dependent variable.

Table 6: OLS regressions with the logged media as dependent variable (N=323)

Media coverage (log)	**Model 1** b(SE)	**Model 2** b(SE)	**Model 3** b(SE)
Twitter activity (log)	-.208(.06)**	-.210(.06)*	-.109(.05)*
Twitter popularity (log)	.166(.07)*	.206(.07)**	.094(.06)
Followers (log)	.770(.09)**	.696(.09)**	.441(.09)**
Male		.274(.21)	.275(.19)
Age		.032(.01)**	.015(.01)**
Non-European background		-.217(.46)	-.008(.43)
Political party (Ref.= CD&V)			
- N-VA	-.514(.33)	-.514(.33)	-.282(.30)
- Groen	-.600(.33)	-.600(.33)	-.610(.32)
- Sp.a	-.139(.35)	-.139(.35)	.005(.32)
- Vlaams Belang	-.843(.44)	-.843(.44)	-.866(.43)*
- VLD	-.414(.34)	-.414(.34)	-.197(.32)
- PVDA	-1.086(.52)*	-1.086(.52)*	-1.822(.51)
Election (ref = Flemish)			
- Federal	-.028(.20)	-.028(.20)	-.215(.18)
- European	.358(.64)	.358(.64)	.430(.59)
Political mandate			.206(.22)
List position			-.057(.01)**
List puller			1.283(.43)**
List pusher			1.922(.35)**
Constant	-3.995(.50)**	-5.192(.57)**	-2.786(.64)**
R^2	**.420**	**.446**	**.531**

* p<.05, ** p<.01

Table 6 presents the impact of Twitter activity, popularity and followers on media attention. Stepwise, the different controlling variables were included to define alterations in the impact of the Twitter measures on media attention. Since the residuals have a non-normal distribution if we would run a normal regression, we use the log transformation of the skewed variables media attention, Twitter activity and Twitter popularity.

Model 1 regresses media attention on Twitter activity, the number of followers and Twitter popularity. We add dummies for the political parties and the type of election, to account for the nested data structure. To a large extent the model confirms our preliminary findings discussed above. Candidates who are more popular on Twitter also receive more attention in the media. We reach a similar conclusion if we look at the number of followers. Those candidates with the most followers are also the ones that attract most media attention. Remarkably, even though previously we found a significant positive (yet weak) correlation between Twitter activity and media coverage, once we control for the other indicators this relationship becomes negative. Thus, candidates who

receive most media attention are not necessarily the most active ones, perhaps because they have less incentive to do so. In addition, candidates that get very little attention in the media, might be more active on Twitter to compensate for the lack of visibility in the mainstream media.

Model 2 shows that, when controlling for socio-demographics, the relation between the independents and the dependent changes very little. Hence, the positive impact of Twitter popularity on media attention still holds. In our final model, Model 3, we add list position, dummies for the list puller and the list pusher and a dummy for political mandate. Based on our preliminary findings on the top 20 candidates for Twitter activity, popularity, followers and media attention, it seems plausible that top candidates, party leaders and candidates that currently have a mandate, might explain the relation between Twitter popularity and media attention and fully drive the previous models. Indeed, in Model 3, we notice that the effect of Twitter popularity on media attention disappears once we control for list position and one's mandates. This indicates that the relationship between popularity in the traditional and in the new media exists primarily because a small political elite, in general party leaders and ministers, receives most of the media coverage and are also the most popular politicians on Twitter.

Since we do not make a causal claim we checked whether we find the same relations if we take Twitter popularity as dependent variable. This is indeed the case: all main results are confirmed (not in table). There is however one notable exception with effects going in the opposite direction. Older candidates get more attention in the traditional news media, while younger candidates score significantly better in terms of Twitter popularity. Again, this does not change our findings, but does indicate that things might change in the future.

Overall, we cannot conclude that it is popularity on Twitter which leads to more newspaper articles or vice versa. However, the two platforms are closely related because a small political elite dominates both Twitter and the traditional news agenda. In this respect, our findings fit the normalization hypothesis. As for now, opportunities to get media attention via Twitter are very limited.

Conclusion and discussion

Over the years election campaigns have become more complex and multi-dimensional. New, mainly digital, media have entered the electoral arena, but the traditional media have maintained a central place in the campaign (Norris, 2002). Although campaign studies have devoted much attention to the

use and effects of new social media, their relationship with the traditional media has remained largely unexplored. In this paper we tried to get a better idea of how old and new media go together by studying a large number of individual candidates. Our study shows that candidates who have a prominent position in the media are generally also the ones with a large number of followers and popularity on Twitter. This is not so much because more followers, mentions or replies translate directly into a higher coverage in the traditional media, but mainly because a small political elite of predominantly party leaders and ministers is successful on both platforms. This elite receives almost all news coverage and at the same time is most successful in having impact with the tweets they send and generating some buzz. At the same time, we found that being more active on Twitter does not influence one's media attention. While candidates may employ Twitter as a way to get in the newspaper, our results suggest that in general this is not a successful strategy, especially if one is not part of the small political elite. The young politician that is able to get via his successful tweets into the news, seems the exception rather than the rule[7].

From the perspective of an ordinary candidate these results are not very encouraging. Campaigns are still run via the mass media, where a limited number of candidates appear in the spotlights. Even though commenters have been optimistic about the new opportunities Twitter may offer, enabling ordinary candidates to receive attention, our study shows that we should tone down these expectations, at least for now. This might explain why the majority of candidates is still not making use of this social medium. Another factor that may refrain candidates from using Twitter is that the adoption rate of Twitter in Flanders (which is close to 20%) lags behind that other social media platforms, such as Facebook (63%).[8] In comparison, the Netherlands, where up to 27% of the population uses Twitter, are amongst the top countries concerning Twitter use (Comscore, 2011). Hence, the role of Twitter might be more prominent in a different national context.

These results should of course treated with caution as this a first explorative study on the relationship between old and new media in a campaign context. Further research is needed to validate these findings in other countries and electoral systems and deepen our understanding of the mechanisms behind it. In particular, three streams of research seem necessary to develop further. First, we need to know more on how journalists use social media as a source of political information in their daily job and how activities of politicians influence their perceptions on the newsworthiness of these actors. Second, also looking more in-depth to those candidates and tweets that are

[7] Cristof Calvo

[8] iMinds-iLab.o (2013) Digimeter Report 6. Adoption and usage of Media & ICT in Flanders. Ghent: iMinds-iLab.o.

successful in making it into the news could improve our understanding of the interrelatedness of traditional and new forms of political communication. Finally, it would be useful to consider the effects of Twitter on the election results. Although Twitter activity does not generate more traditional media attention, it might still be a useful strategy for ordinary candidates if it leads to more preferential votes. When studying different sorts of impact of Twitter this study at least showed that it is important to distinguish between different aspects of social media use by politicians.

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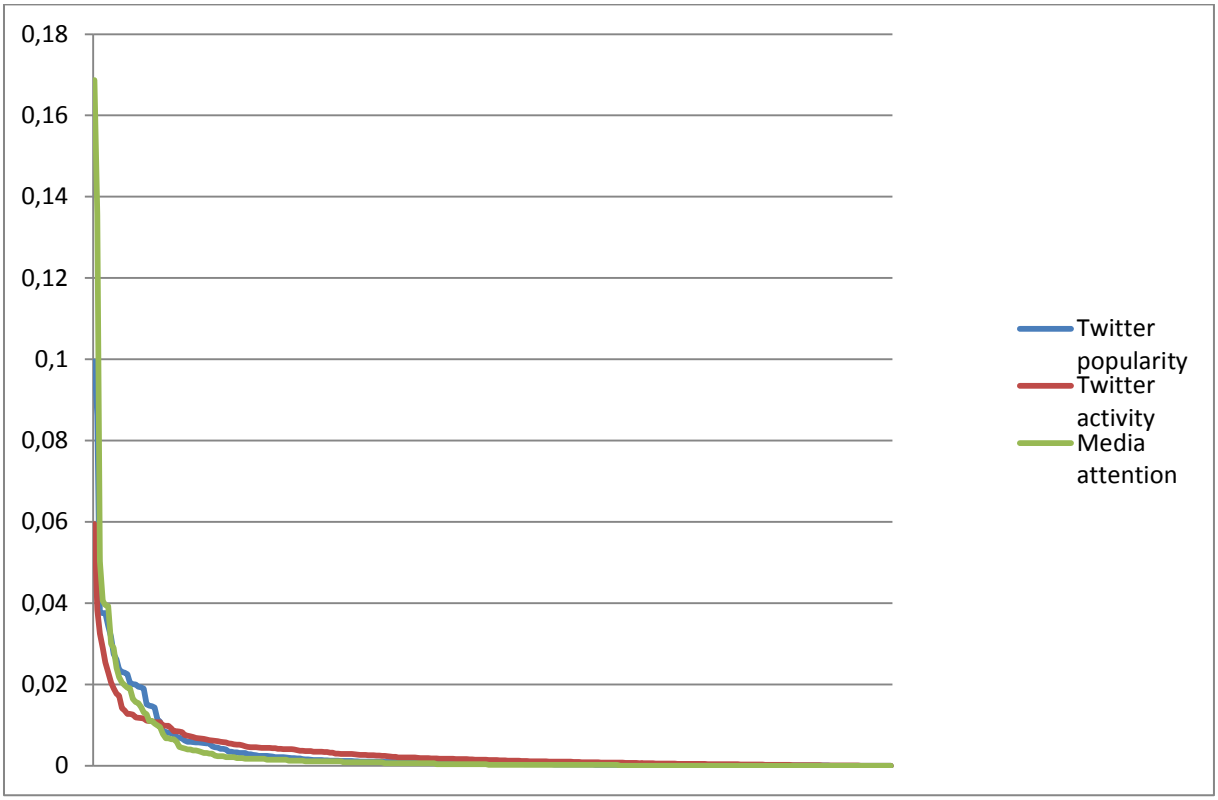
Appendix A: The relative distribution of Twitter popularity, activity and mass media attention



Appendix B: Overview of the top 20 in the media and on Twitter

Place	Media attention	Twitter activity	Followers	Twitter popularity
1	B. De Wever (798)	M. Penen (770)	A. de Croo (47301)	K. Peeters (8093)
2	K. Peeters (641)	T. Veys (497)	K. Peeters (25971)	B. De Wever (7012)
3	H. Crevits (238)	H. El Hannouti (421)	A. Turtelboom (23805)	K. Calvo (3067)
4	W. Beke (192)	F. de Clerck (375)	S. Bracke (23160)	F. De Winter (3059)
5	G. Bourgeois (187)	S. Smets (329)	F. van den Bossche (22805)	F. Van den Bossche (3057)
6	A. de Croo (186)	A. de Ridder (298)	B. De Wever (21860)	W. Beke (2803)
7	W. van Besien (142)	P. Cousaert (265)	H. Crevits (18507)	H. Crevits (2574)
8	A. Turtelboom (137)	D. Buntinx (247)	N. Slangen (17804)	P. Dedecker (2239)
9	K. Geens (114)	K. Peeters (230)	W. Beke (14708)	S. Bracke (2127)
10	J. Vandeurzen (103)	K. Geens (223)	J. Crombez (13370)	A. De Croo (1930)
11	J. Crombez (97)	A. D'Archambea (184)	F. Dewinter (10052)	F. De Clerck (1879)
12	P. Mertens (94)	D. Avonts (176)	M. de Clercq (9408)	A. De Ridder (1864)
13	J. Schauvliege (91)	F. Dewinter (165)	I. Lieten (9051)	W. Van Besien (1830)
14	B. Somers (90)	D. Vansintjan (165)	P. Dewael (8587)	K. Geens (1661)
15	F. Dewinter (78)	K. Calvo (163)	K. Calvo (8546)	P. Mertens (1637)
16	I. Lieten (74)	N. Slangen (154)	J. Schauvliege (7102)	J. Crombez (1627)
17	M.de Coninck (73)	P. Dedecker (153)	F. Piryns (6332)	T. Francken (1582)
18	P. Muyters (68)	D. Van Duppen (152)	B. Tommelein (6254)	P. De roover (1569)
19	H. Bogaert (62)	K. Janssens (151)	A. de Ridder (5911)	A. Turtelboom (1542)
20	F. Van den Bossche (60)	L. Ide (144)	P. Mertens (5853)	N. Slangen (1227)