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Getting connected: The effects of online political communication on citizens' political involvement

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CHAPTER 3
THE EFFECTS OF CANDIDATES' TWITTER USE ON PREFERENTIAL VOTES ●

ABSTRACT

This study investigates the content characteristics of Twitter during an election campaign, and the relationship between candidates' style of online campaigning (i.e., politically personalized and interactive communication) and electoral support for those candidates. Thereby, it provides a better understanding of the linkage between the use of Twitter by candidates and effects on preferential votes. Two data sources are used to examine this relationship: first, a quantitative computer-assisted as well as a manual content analysis of tweets posted by political candidates during the Dutch national elections of 2010 ($N = 40,957$) and second, a dataset containing the number of votes for electable political candidates during that period. The findings show that using Twitter has positive consequences for political candidates. Candidates who used Twitter during the course of the campaign received more votes than those who did not, and using Twitter in an interactive way had a positive impact as well.

INTRODUCTION

New media have become increasingly important during election campaigns. The potential of Internet to connect with and mobilize voters, gives politicians the opportunity to promote themselves and to communicate interactively with the electorate, without the interference of journalists (Blumler & Gurevitch, 2001; Golbeck, Grimes, & Rogers, 2010; Parmelee & Bichard, 2011). It is not surprising that political organizations have embraced the Internet. Political candidates are increasingly using new media, such as Twitter, Facebook and other online platforms.

The rise of web campaigning has also been subject to a growing amount of scholarly inquiry (e.g., Gibson & McAllister, 2006; Wagner & Gainous, 2009). Although these important studies give valuable insights into both the content of online political communication (see e.g., Foot & Schneider, 2006; Lilleker et al., 2011) and the potential effects on citizens (see e.g., Boulianne, 2009; Kenski & Stroud, 2006; Shah, Cho, Eveland, & Kwak, 2005), studies that provide a link between the two arenas are relatively scarce (Gibson & McAllister, 2006). Particular studies that examine the persuasive effects of *different styles* of online political communication have been limited. Prior work within this field has frequently pointed out that new media brings new opportunities for politicians (Chapter 4; Trammell, Williams, Postelnicu, & Landreville, 2006): Candidates increasingly use interactive communication styles (e.g., reacting on comments and posting tweets) and personalized communication styles (e.g., exchange information about their private lives and personal emotions) when communicating online. However, to what extent these communication styles (i.e., politically personalized and interactive campaigning) influence the electorate (e.g., the amount of votes a candidates will receive because of the usage of new media) remains unknown.

The current study tries to fill this gap by investigating (a) the content characteristics of political campaigning on Twitter, (b) the effects of candidates' use of online

campaigning (versus no use) on electoral support, and (c) the relationship between candidates' style of online campaigning and electoral support. This study focuses on the micro blogging platform Twitter, because Twitter has become an essential and frequently used medium during election campaigns – besides party and candidate websites and Facebook (Parmelee & Bichard, 2011; Tumasjan, Sprenger, Sandner, & Welpe, 2010). However, little is known about the content characteristics of political tweets and even less is known about the impact Twitter has on voting. So, by focusing on candidates' Twitter use, this study sheds new light on the linkage between the uses and effects of new media. Hence, the aim of the present study is to understand the relationship between the (style of) usage of Twitter by political candidates, and electoral support for these specific candidates (i.e., the amount of votes a candidate receives).

Two data sources are used to investigate the relationship: (1) a quantitative computer-assisted as well as a manual content analysis of tweets posted by political candidates during the Dutch national elections of 2010 and (2) an aggregated dataset containing candidates' electoral support (i.e., amount of preferential votes). In the next section, the central characteristics or style elements used in web campaigning will be described. Subsequently, the potential effects of web campaigning on electoral support are discussed. Afterwards, two hypotheses and one research question will be proposed.

Communication styles on Twitter: Interactive and political personalized communication

The literature that studies the content of web campaigning has been focusing on different styles and characteristics (Gibson & McAllister, 2006). Two characteristics are repeatedly claimed as most important: interactivity and, to a lesser extent, political personalization.

Sundar, Kalyanaraman and Brown (2003) point out that "several researches have claimed that interactivity is a key variable for studying the uses and effects of new media technologies" (p. 32). Interactivity can be operationalized in many different ways (see e.g., Lee & Shin, 2012; Liu & Shrum, 2002; Sundar, Kalyanaraman, & Brown, 2003; Warnick, Xenos, Endres, & Gastil, 2005), but two-way communication (the opportunity for reciprocal communication) is a central concept in many definitions. Two-way communication can be defined as follows: one communicator can communicate directly to another one and vice versa (Tedesco, 2007). This characteristic makes new media different and unique from offline media, as offline media principally offers information without receiving information back. In the political context, interactivity is mainly examined on party and candidates' websites (Sundar et al., 2003; Warnick et al., 2005) and, to a lesser degree, on Twitter (Lee & Shin, 2012; Parmelee & Bichard, 2011). Both areas of research have shown that interactivity is increasingly used during campaigns (Stromer-Galley & Foot, 2002), especially because it offers opportunities for direct communication, which is particularly true for Twitter (Parmelee & Bichard, 2011). One of Twitter's main functions is to facilitate direct communication between users, as users can comment on each other's posts. Studying the uses and effects of interactivity in the context of Twitter is, therefore, very relevant.

Another important characteristic of online communication is political personal-

ization. Political personalization is conceptualized as a shift of focus from political parties and institutions, to individual candidates and politicians (Adam & Maier, 2010; Rahat & Sheafer, 2007). It seems that this shift of focus is present in new media, as individual candidates and politicians are increasingly using new media to communicate with their electorate (Van Santen & Van Zoonen, 2010). However, it could be argued that a focus on politicians, instead of parties is different from the personalization that is present on Twitter. Twitter is personalized per definition, as the candidate is usually the holder of the Twitter account. Communication on Twitter therefore conceptualized as a focus on candidates' private life (privatization), on candidate's emotions and feelings (emotionalization) and candidates' competencies and professional activities (individualization; Van Santen & Van Zoonen, 2010). Recent work that investigated personalization in new media supports this argumentation line. Golbeck, Grimes and Rogers (2010) found that politicians "are primarily using Twitter to disperse information, particularly links to news articles about themselves (…) and to report about their daily activities (…). [Twitter] is [used as] a vehicle for self-promotion" (p. 1612). In other words, it seems that the communication on Twitter is often about candidates' private persona and less about political issues.

Despite the evidence that politicians are adopting interactive and personalized communication styles on Twitter, there is little evidence that shows that these forms of campaigning actually have an effect. This study is going to investigate whether there is a link between style of campaigning and electoral support (i.e., the amount of votes candidates receive).

Persuasive effects of campaigning on Twitter

In general, research that examines the effects of Internet use on voters demonstrates that the effects of new media are often positive (for an overview, see Boulianne, 2009). Different scholars support the notion that Internet use has a mobilizing effect on citizens' political engagement (e.g., Kenski & Stroud, 2006). They argue that, in contrast to traditional media, the (political) information online is flexible and the cost of participation is low. This encourages citizens to learn more about politics. As a result, those citizens become more politically involved (Shah et al., 2005; Wang, 2007).

The literature that studies the effects of web campaigning on voters, points to equal findings (Rackaway, 2007). Already in 1997, D'Alessio found a link between web campaigning and voting. He found that having a website resulted in more votes, so that candidates who did not have a website received significantly fewer votes than candidates who did (D'Alessio, 1997). Later studies confirmed those findings. For example, Gibson and McAllister (2006) found that web campaigning exerts a positive impact on the level of support a candidate receives. This study was conducted during the Australian election of 2004.

There are, however, scholars who are more skeptical. Park and Perry (2008) point out that although campaign websites have a direct effect on political engagement, websites tend to focus more on getting supporters involved who are already engaged. They found that the use of campaign websites influences different forms of political participation (i.e., donating money, sending political e-mails and persuading others to vote),

but not voting. In other words, web campaigning might not influence voting, in contrast to other forms of political participation. However, later work conducted by Wagner and Gainous (2009) found that web presence was a significant predictor of total votes for specific candidates. Similarly, Gibson and McAllister (2011) demonstrate that use of online electoral sources and particularly campaign websites had a positive influence on vote choice. So overall, it seems that there is a substantial amount of evidence supporting the more positive view.

While previous studies focused on political websites, this study focuses on the effects of Twitter use on electoral support. Twitter is a different platform than websites, as Twitter is a social networking site and a (micro) blog platform that is mainly used to directly send and read messages. Websites have a more diverse content, such as news items, pictures or forums. Besides, websites are not primarily used for social interaction. Thus, it can be questioned whether the effects of Twitter use are similar. Recent work that studied the effects of Twitter, however, points to similar effects: candidates' Twitter use seems to have a positive effect on electoral support (Lee & Shin, 2012; Parmelee & Bichard, 2011). Therefore, it is expected that Twitter use (compared to no use) positively affect the amount of preferential votes a candidate receives. Hence, the following hypothesis is formulated:

HI: *Political candidates who use Twitter to communicate with their electorate will receive more preferential votes than political candidates who do not use Twitter to communicate with their electorate.*

Although the studies by D'Alessio (1997), Gibson and McAllister (2006; 2011) and Wagner and Gainous (2009) compellingly link online campaigning and electoral support, they do not give insights into the specific underlying mechanisms that explain the association. An explanation, however, can be found in the interactivity literature. But before the interactivity literature will be discussed, the operational definition of interactivity should be explained. In this study, Liu and Schrum's definition is used as a starting point. Liu and Schrum (2002) define interactivity as follows: "The degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized" (p. 54). Liu and Schrum (2002) specify between three dimensions of interactivity: active control (i.e., controlling the content), two-way communication (i.e., reciprocal communication between users), and synchronicity (i.e., immediate response to communication, which relates to technological features). Because this study focuses on the effects of style of communication on Twitter, and since the style of communication on Twitter might largely differ in the extent to which it incorporates two-way communication (between political actors and users, and between users), interactivity is operationalized as two-way communication.

Turning to the literature on the effects of interactivity, researchers repeatedly show the beneficial effects of using interactive communication in political campaigns (Lee & Shin, 2012; Rafaeli & Ariel, 2007). For example, Sundar et al. (2003) found that individuals who visit a highly interactive political website, had more positive evaluations of political candidates than individuals who visit a low interactive website. Utz (2009) observed that politicians, who reacted online on comments, were seen as more favorable than those who did not. Furthermore, Vliegenthart and Van Noort (2010), who studied party websites, found positive associations between interactivity and election results.

Interactivity or two-way communication, as it is present on websites, is to some extent similar to interactivity used in tweets. Twitter has different communication tools that help users to communicate with each other (Lovejoy, Waters, & Saxton, 2012). These tools contribute to an online (political) dialogue, by offering it users the opportunity to send, read, respond and forward messages directly to others (Boyd, Golder, & Lotan, 2010; Small, 2011). This concept (of engaging in an online political dialogue) relates to the conceptualization of interactivity that is used in this study; two-way communication. Twitter has three tools that facilitate two-way communication: mentions, retweets and hashtags. Users are able to respond to others through the use of @mentions (Lovejoy et al., 2012; Small, 2011). Posting a tweet with an @ followed by a name, means that a Twitter user directly sends a message to another user (Lovejoy et al., 2012). Thereby, an @mention targets the other person's attention, which is an important condition for a conversation to occur (Boyd et al., 2010). Another form of interactive communication is the use of retweets (Boyd et al., 2010). Retweets are forwarded messages that were posted by others. It enables users to pass on information to others. Lastly, hashtags are used to mark tweets on a specific topic. By using a hashtag, other users can follow conversations focusing on one specific topic and are, thereby, stimulating group discussion (Boyd et al., 2010).

Recently conducted work on the effects of interactivity used in the communication on Twitter found some positive effects on intentions to vote for a candidate (Lee & Shin, 2012; Parmelee & Bichard, 2011). A theoretical explanation for these effects has been proposed by Lee and Shin (2012). They emphasize that interactivity induces social presence, which consequently leads to higher intention to vote for candidates. Social presence is the extent to which an individual feels that another communicator (in this case the candidate) is present and there is an opportunity to engage in an actual conversation (Lee & Shin, 2012; Short, Williams, & Christie, 1976; Tanis & Postmes, 2003; Tanis, 2003). In other words, social presence means having the feeling that another communicating person is close to you and you can connect to that person. Gunawardena and Zittle (1997) explain how the concepts of interactivity and social presence are related. They argue that "social presence is a subjective measure of the presence of others, […] while interactivity is the actual quality of a communication sequence or context. When [interactivity] is realized and when participants notice it, there is social presence" (p. 10-11). Similarly, Fortin and Dholakia (2005), emphasize that "interactivity is likely to create feelings of social presence for the user through the availability of open channels allowing for two-way communication" (p. 390). Taken together, it seems that interactivity often induces social presence. This is also shown by a recent experimental study. Lee and Shin (2012) showed that exposure to an interactive twitter page fosters social presence among people who usually avoid social interaction. Induced social presence, in turn, positively affects voting intentions. Nevertheless, this study could only measure the actual interactive features of the communication on Twitter (e.g., mentions and

retweets). Because interactive features enable reciprocal communication between political actors and users, it can be theorized that this may consequently lead to (feelings of) social presence and intimacy among the readers of those tweets. To sum up, based on the prior work of interactivity on new media and political tweets more specifically, it is expected that:

H2:   *The more reciprocal interaction a political candidate uses in their communication on Twitter, the more preferential votes this political candidate will receive.*

Another explanation for the effect of web campaigning and vote support for specific candidates is less obvious and can be found in the literature on political personalization. The literature that addresses the consequences of political personalization argues that the effects on the electorate are often positive (Druckman, 2003; Kleinnijenhuis, Maurer, Kepplinger, & Oegema, 2001). Political personalization may give parties a face and a voice, which can help parties to communicate their messages more effectively (for an overview, see Brettschneider, 2008). An actual person is much more appealing than for example a political document (McAllister, 2007). For instance, Rosenberg et al. (1986) showed that if politicians are positively evaluated on their appearance, this could positively impact vote intention. Furthermore, Chapter 4 found that users who visited a candidate website felt more close and interested in politics, than individuals who visited a party website. These feelings of closeness may also lead to increased social presence and that may consequently lead to an increase in voting. Lastly, Lee and Oh (2012) argue that personalized messages might induce greater interest into politicians, because these personalized stories draw greater attention towards the message. This induced interested in, for example, a candidate will then lead to more votes.

Because personalization on Twitter is conceptualized as a focus on candidates' private life, emotions and activities, and not as a focus on candidates instead of parties, the effects can also be negative. A recent conducted study in the United States found a negative effect of talking about one's private life on Twitter. This study demonstrated that a focus on personal topics in political tweets, predicted a campaign loss (Parmelee & Bichard, 2011). It could be that voters who notice that candidates talk more about personalized issues and less about political issues, see those candidates as less competent. However, due to the lack of research into the effects of personalization on Twitter and inconclusive evidence, the following research question is formulated:

RQ 3:   *What is the effect of candidates' personalized communication on the amount of preferential votes they receive?*

METHOD

To test the hypotheses, two data sources are used: first, quantitative content analyses of all tweets posted by political candidates in the period leading up to the Dutch national elections on June 9, 2010 and two months after, was used. Second, a dataset containing all 'preferential votes' for electable political candidates was used. In the Netherlands (a parliamentary democracy with a party-list system and proportional representation), voters can vote for individual candidates. This enables voters to cast their vote for a candidate higher or lower on the list. Although the total amount of votes determines the number of seats in the Parliament, and seats will be allocated according to the original position of the list, candidates who receive more votes than the electoral threshold ('kiesdrempel') will be elected into the Parliament irrespective of their original position on the electoral list (Van Holsteyn & Andeweg, 2010).

This study is designed to link the content analysis of online political communication to aggregated data about vote choice. This allows us to assess the relationship between the online content of political communication and its effect on electoral support. A computer-assisted as well as a manual content analysis of political tweets was used to examine how political candidates communicate with citizens. In cooperation with the agency 'PolitiekOnline', political tweets were collected. The collection contains all tweets posted by political candidates, during the first three months and approximately two months after the Dutch national elections in 2010 (i.e., March 3, 2010 to August 17, 2010). This resulted in a sample of 40,957 tweets, posted by 177 politicians from 8 political parties.

Content analyses

For the computer-assisted content analysis, IBM SPSS 20 was used to extract specific interactive features from the tweets (e.g., retweets). To conduct the manual content analysis, a random sample of the total number was used. This resulted in a total of 1,634 tweets that were coded and analyzed. Three coders, who were trained and supervised during regular coding meetings at the University of Amsterdam, conducted the coding of the tweets. Furthermore, the codebook was finalized after a few meetings with coders. Intercoder reliability calculations were based on a subsample of 100 tweets and was calculated using pairwise percent agreement.

For the manual content analysis, previous studies that examined both offline and online political communication were used to code the style elements and characteristics in the tweets (Parmelee & Bichard, 2011; Van Santen & Van Zoonen, 2010). Two style characteristics were coded in the data; interactivity and political personalization. Computer-assisted content analysis was used to identify all features that incorporate some form of *interactivity* in the data (based on a study conducted by Parmelee & Bichard, 2011); the amount of mentions (identified as '@', used to 'talk' directly to another person), retweets (identified as 'RT', used to forward somebody else's tweet) and hash tags (identified as '#', used to write a tweet that covers a bigger discussion on the web) were identified. Because a computer-assisted content analysis was used, calculating intercoder reliability was not necessary.

Political personalization was derived from a previous study on personalization (Van Santen & Van Zoonen, 2010). Following this study, three forms of political personalization were coded; emphasize on candidate's personal life (pairwise percent agreement = 87.3 %), candidate's emotions (pairwise percent agreement = 76.7 %) and candidate's professional, personal activities (pairwise percent agreement = 86.7 %) were distinguished.

In order to examine to what extent the latter two characteristics are indeed key characteristic of campaigning on Twitter (i.e., whether or not these styles of communication are often used on Twitter), they were compared with two other characteristics that are also often present in political communication during campaigns. First, '*emphasis on the campaign*' was derived from a study on political tweets (Parmelee & Bichard, 2011). Three topics of campaigning are distinguished; focus on activities in the election campaign (i.e., advertising and talking to people on the street or organizing campaign meetings; pairwise percent agreement = 97.3 %), mobilization (i.e., call to participate in the campaign; pairwise percent agreement = 99.33 %) and emphasis on polls (pairwise per cent agreement = 99.3 %). Second, '*reference to general news*' (pairwise per cent agreement = 83.33%) and '*political standpoints*' were measured (pairwise per cent agreement = 89.33%). In the data analysis all styles are included as relative numbers of the total tweets that were posted during the course of the election campaign. The unit of analysis was the tweet and the tweet could contain several topics. For example, the topic of the tweet can cover the election campaign, but it can be personalized as well (e.g., contain emotions/professional activities).

Votes

The aggregated data of electoral support (amount of preferential votes) were collected from the official election report of the Dutch Election Counsel (Kiesraad, 2010). This resulted in a sample of 446 politicians from 8 political parties. Because the dependent variable, *number of preferential votes* (ranging from 32 till 1617636; $M = 20239.49$, $SD = 140981.80$), was positively skewed, a natural log transformation to normalize the item was performed. Log transformation is a commonly used strategy to deal with positive skewed data, as it compresses the right tail of the distribution (Field, 2009). After the transformation, the dependent variable was normally distributed.

Besides the number of preference votes, the variable whether or not *candidates used Twitter during the election campaign* (0 = not using Twitter, 1 = using Twitter; $M = .40$, $SD = .49$) was gauged. Other (control) variables were also extracted from the Dutch Election Counsel (Kiesraad, 2010). More specifically, several variables were extracted and included that generally predict the amount of preferential votes a candidate will receive (e.g., see Wauters, Weekers, & Maddens, 2010). This study gauged the following control variables: *candidate's sex* (1 = male, 2 = female; $M = 1.35$, $SD = .48$), *candidates position on the list* (ranging from 1 until 75; $M = 30.27$, $SD = 18.97$), *first woman on the list* (1 = first woman, 0 = not first woman; $M = .02$, $SD = .13$), *last candidate on the list* (1 = last candidate, 0 = not last candidate $M = .02$, $SD = .13$), and *incumbency* (1 = incumbent parliamentarian in office, 0 = no incumbent parliamentarian in office; $M = .28$, $SD = .45$). Furthermore, to assess the *candidates' prominence in the media* (media is all newspapers, magazines and trade journals that are available it the Dutch language), Lexis-Nexis Academic was used. Prominence in the media is operationalized as the number of news articles that referred to the specific candidate from March 3, 2010 till June 9, 2010 (ranging from 0 till 4677; $M = 98.80$, $SD = 435.42$), as a proxy for familiarity with the candidate. Also, the following predictors were used: average *amount of followers* a candidate had during the course of the election campaign (ranging from 6 till 82297;

$M = 3537.85$, $SD = 9999.07$) and *total numbers of tweets* (ranging from 0 to 1456; $M = 164.78$, $SD = 204.41$). To analyze the hypotheses, descriptive analyses and hierarchical multiple regressions were used. In all regression analyses, the control predictors were entered in Model 1, and the Twitter predictors in Model 2 and 3. Furthermore, to avoid multicollinearity between the variables total number of tweets and number of tweets that were interactive and personalized, the variables measuring interactivity and personalization where included as relative variables (as a percentage of the total number of tweets posted by the political candidates).

Results

Figure 3.1 shows that the number of tweets posted by political candidates increased during the election campaign and decreased after the Election Day. In the first week of the data collection, 68 tweets were posted per day (on average). In the week prior to Election Day, 814 tweets were posted per day. In the last week of the data collection, 78 tweets were posted per day.

Figure 3.1 **Absolute number of tweets posted by Dutch political candidates (y-axis). Before and after election day (June 9, 2010; $N = 40,957$).**

— NUMBER OF TWEETS
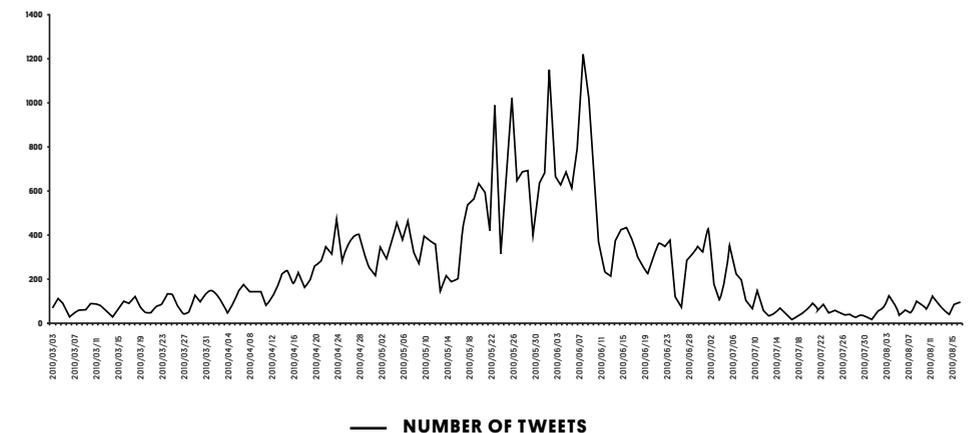
Next, the level of political personalization, the amount of interactive features and the amount of focus on the campaign used in the tweets is examined (see Table 3.1). As expected, the results in Table 3.1 show that the candidates' tweets were more often about their private persona (about emotions, private life and activities), than about the campaign. Secondly, the results show that the candidates' tweets were also interactive in nature. More than a quarter of the tweets had some form of interactivity incorporated in their tweets. These results are supporting initial expectations; interactivity and personalization are indeed key characteristics of online political communication.

Table 3.1   Content characteristics and style elements in the tweets (percentage of total number of tweets)

	During the election campaign	After the election campaign
Political personalization	(n = 1,204)	(n = 430)
Candidates' emotions	34.2 %	27.9 %
Candidates' professional activities	24.7 %	18.4 %
Candidates' personal life	17.1 %	15.6 %
Interactive features	(n = 30,186)	(n = 10,771)
Mentions	28.5 %	26.2 %
Hashtags	25.6 %	25.3 %
Retweets	9.0 %	6.9 %
Campaign	(n = 1,204)	(n = 430)
Focus on the election campaign	16.7 %	0.0 %
Mobilization	3.3 %	0.9 %
Emphasis on polls	1.9 %	0.2 %
Other topics	(n = 1,204)	(n = 430)
Reference to general news	17.9 %	14.0 %
Political standpoints	7.0 %	4.4 %

Hierarchical multiple regression analysis was used to examine whether candidates' use (vs. no use) of Twitter predicts the amount of preferential votes, after controlling for the influence of the variables that generally predict the amount of preferential votes a candidate will receive (see Table 3.2). The control predictors were entered in Model 1. After including the variable 'use of Twitter during election campaign' in Model 2, the results show a significant effect of Twitter use by candidates on the amount of votes they received (ß = .100, p < .001, one-tailed). Apparently, using or not using Twitter during the election campaign has a positive significant impact on the amount of preferential votes a candidate received. The total variance explained by the model as a whole was 67.9 %, whereas the use of Twitter explained 0.9 % of the total variance. In other words, although the effect is small, it matters for political candidates to use Twitter. The first hypothesis is therewith supported.

Table 3.2   Effects of Twitter use by political candidates on the amount of preferential votes

	Model 1	Model 2		
	B	B	β	(SE)
Constant	6.422***	6.253***		(.180)
Candidates' sex (ref. = male)	.533***	.512***	.143***	(.099)
Candidates' position on the list	− .027***	− .026***	− .285***	(.003)
First woman on the list	1.982***	2.052***	.159***	(.362)
Last candidate on the list	1.225***	1.238***	.096***	(.353)
Candidates' prominence in the media	.002***	.002***	.421***	(.000)
Incumbency	1.079***	1.107***	.291***	(.120)
Use of Twitter during election campaign		.348***	.100***	(.096)
Adjusted R2	.670	.679		
Incremental R2 (%)		0.9***		
N	445	445		

Note. Ordinary least squares regression.
*p < .05, **p < .01, ***p < .001, one-tailed.

Next, the second hypothesis was examined (see Table 3.3). The second hypothesis predicted that the more reciprocal interaction a political candidate uses in their communication on Twitter, the more preferential votes this political candidate will receive. The control predictors were again entered in Model 1. After including the variables 'total amount of tweets' and 'total amount of followers' in Model 2, to control for the effects of sending out more tweets and having more followers, it appears that one interactivity feature was statistically significant (see Model 3, Table 3.3). As expected, it seems that the use of mentions exerts a significant positive effect on the amount of preferential votes (ß = .096, p = .039, one-tailed). The total variance explained by the models as a whole was 74.1 %, whereas the Twitter variables (i.e., amount of followers, total number of tweets and the interactivity predictors) 1.6 % and 0.6 % of the total explained variance. This partly supports the second hypothesis: Candidates that use a more interactive style in their communication to voters (i.e., included features that enable reciprocal interaction) received more votes, than candidates who were less interactive.

Interestingly, no significant relationship between the amounts of retweets or hash tags used by the candidate and the number of preferential votes was found. In other words, the use of two other features of interactive communication did not result in more preferential votes. A possible explanation might be that these features do not involve

two-way communication. Retweeting is used to forward a tweet and hash tags are used to participate in a bigger discussion. Both features are not designed to offer direct reciprocal communication to other users on twitter, in contrast to the use of mentions.

Table 3.3   **Effects of interactive Twitter use (relative numbers) by political candidates on the amount of preferential votes**

	Model 1	Model 2	Model 3		
	B	B	B	β	(SE)
Constant	6.689***	6.570***	6.509***		(.296)
Candidates' sex (ref. = male)	.538***	.567***	.568***	.146***	(.156)
Candidates' position on the list	− .028***	− .027***	− .026***	− .254***	(.005)
First woman on the list	1.686**	1.007	1.705*	.074*	(.622)
Last candidate on the list	.718	.683	.672	.038	(.702)
Candidates' prominence in the media	.002***	.001***	.001***	.457***	(.000)
Incumbency	1.040***	.971***	.952***	.234***	(.191)
Amount of followers		.000***	.000**	.171**	(.000)
Total number of tweets		.000	.000	− .022	(.000)
Reference to mentions			1.002*	.096*	(.563)
Reference to retweets			− .341	− .018	(.943)
Reference to hashtags			− .490	− .052	(.422)
Adjusted R^2	.725	.739	.741		
Incremental R^2 (%)		1.6**	0.6		
N	176	176	176		

Note. Ordinary least squares regression.
*$p < .05$, **$p < .01$, ***$p < .001$, one-tailed.

Furthermore, the results show that having more followers on Twitter (i.e., people who subscribed to the candidates' Twitter) leads to significant more preferential votes (ß = .171, p = .001, one-tailed). It seems that being more popular on Twitter, has positive effects on electoral support as well. This finding was quite predictable. However, more surprisingly, the results in Table 3.3 show that sending out more tweets does not lead to significant more preferential votes. In other words, using Twitter more frequently during the course of the campaign does not have an effect.

     Last, the third research question was examined (see Model 3, Table 3.4). The third research question asked what the effect was of candidates' personalized communication

on the amount of preferential votes they received. After including the three measures of political personalization, an effect of personalized communication on the amount of preferential votes a candidate receives was not found. Apparently, using a more personalized style of online campaigning on Twitter had no impact on electoral support.

Table 3.4   **Effects of personalized Twitter use by political candidates on the amount of preferential votes**

	Model 1	Model 2	Model 3		
	B	B	B	β	(SE)
Constant	6.626***	6.495***	6.380***		(.336)
Candidates' sex (ref. = male)	.599**	.636***	.635***	.163***	(.170)
Candidates' position on the list	− .029***	− .027***	− .028***	− .271***	(.005)
First woman on the list	1.596**	.896	.967	.072	(.631)
Last candidate on the list	.867	.823	.743	.032	(.986)
Candidates' prominence in the media	.001***	.001***	.001***	.445***	(.000)
Incumbency	1.136***	1.056***	1.081***	.266***	(.203)
Amount of followers		.000**	.000**	.184**	(.000)
Total number of tweets		.000	.000	− .009	(.000)
Reference to professional activities			− .019	− .003	(.302)
Reference to emotions			.332	.046	(.313)
Reference to private life			.163	.020	(.363)
Adjusted R^2	.743	.764	.766		
Incremental R^2 (%)		2.1**	0.2		
N	146	146	146		

Note. Ordinary least squares regression. Due to the sampling for the manual coding, it was not possible to include all candidates. For some candidates the level of political personalization in the tweets could not be calculated. For that reason, the number of cases in this table is lower, than the number of cases in Table 3.3.
*$p < .05$, **$p < .01$, ***$p < .001$, two-tailed.

Turning back to our hypotheses and research question, hypothesis one and two are supported. Regarding hypothesis one; using Twitter during the election campaign resulted in more votes, than not using Twitter. Regarding hypothesis two; candidates who use a more interactive style (i.e., reciprocal interaction) in their communication to voters received more votes, than candidates who were less interactive. Evidence for research question three was not found; using a more personalized style of online campaigning on Twitter had no impact on votes.

DISCUSSION AND CONCLUSION

The purpose of this study was threefold: First, the communication styles of political campaigning by candidates on Twitter were investigated. Second, the effect of candidates' use of online campaigning on electoral support (i.e., the amount of preferential votes) was examined. And to conclude, the relationship between candidates' style of online campaigning and preferential votes was examined. By linking content data of political tweets and aggregated data of voting, this study provides a link between the uses and effects of Twitter during an election campaign. Evidence reported in this study support the expectation that such a link between uses and effects exists: It seems that using Twitter and using it interactively, has positive consequences for political candidates.

The results presented in this paper support the notion that the use of Twitter by political candidates increased during the course of the election campaign. This indicates that Twitter is actually an important platform for political candidates to communicate with their electorate. Another major finding is that Twitter is mainly used as a vehicle to talk about candidates' private persona. As expected, political candidates often talk about their emotions, private life and professional activities on Twitter. This finding corroborates Golbeck et al. (2010), who observed that new media are increasingly used as a vehicle for political candidates' self-promotion. Another important popular characteristic of campaigning on Twitter is the use of interactive features. Engaging in an online conversation, by responding to other people (by using mentions or forwarding another persons' tweet), is a popular style of communicating on Twitter. These findings further support the overall perception that interactivity, or in other words, direct two-way communication, is a key characteristic of new media (Sundar et al., 2003).

However, the most interesting finding emerging from this study is the significant impact Twitter has on preferential votes. Evidence shows that candidate's use of Twitter exerts a positive effect on electoral support, even when the usual and well-established predictors that explain vote choice were included as control variables (Wauters et al., 2010). In other words, a candidate who used Twitter during the course of the campaign received more preferential votes than candidates who did not use Twitter. However, it should be pointed out that the effect of Twitter use was not large, but one would also not expect a huge effect. The effect of Twitter use is above and beyond the effects of established factors (and these factors are all very strong predictors), which indicates that observing a significant effect for Twitter use is even more interesting. This finding also adds to the growing body of literature that found positive effects of web campaigning specifically, and using Internet for political purposes more generally (for an overview of the literature, see Boulianne, 2009).

Another important finding is that the style of campaigning also seems to matter. Results showed that communicating in an interactive way had a significant positive impact on the amount of preferential votes a candidate receives: candidates that use a more direct way of communicating received more support than those who did not. Both findings are in concordance with previous studies that examined the effects of new media and argued that online platforms used by politicians are becoming more and more important during election campaigns (Gibson & McAllister, 2006; Gibson & Cantijoch,

2011; Lee & Shin, 2012; Vliegenthart & Van Noort, 2010; Wagner & Gainous, 2009).

Surprisingly, a relationship between different forms of political personalization and number of preferential votes was not found. A possible explanation might be that the context of Twitter is different from other media. Twitter is personalized per definition (as the politician is the holder of the Twitter account). People who read comments posted on candidates' Twitter accounts already know that the tweet is written by an individual candidate and not by, for instance, the party. Therefore, they might already expect that tweets are highly personalized. Future studies, which focus on the effects of personalization present in different (online) contexts, are therefore recommended. It would be interesting to see which level of personalization, a focus on politicians versus parties or a focus on personal life or not, has an effect on vote intentions.

Before the implications of this study will be discussed, some reservations need to be made. As has been noted by other scholars, caution must be applied regarding the effects of Twitter use. Using or not using Twitter, might also be a proxy for professionalization of the candidates' entire campaign, such as better and more active campaigning and intensive use of other online platforms (D'Alessio, 1997; Gibson & McAllister, 2006; Vliegenthart & Van Noort, 2010). In his study on the effects of political websites, D'Alessio (1997) addresses this reservation in more detail. He notes that "posting a website is one element of an entire suite of strategies employed by the candidate, the sum of whose payoffs is subsumed under the main effect for having a website" (D'Alessio, 1997, p. 498). This might also be the case in this study: Having a Twitter account might be a proxy for all the strategies employed by the candidate. The sum of these strategies is incorporated under the main effect of having a Twitter account.

Although the argument of professionalization is believed to be very valid, experimental literature on interactivity provides also another explanation for the effects. As been pointed out by Lee and Shin (2012), interactive communication on Twitter may induce higher levels of social presence, and these feelings of social presence (the feeling that the politician is closer to you) may in turn lead to higher intentions to vote for that specific candidate. Due to the aggregated data used in this study, such individual-level predictors which might explain the effects of interactive communication could not be included. The latter explanation might be well suited for the study's findings, however, cannot yet be made. Further investigation using experimental research into the effects of different styles of communicating on Twitter and the specific underlying mechanisms and processes explaining effects, is therefore strongly recommended. For example, future work should include social presence as a mediator that explains the relationship between interactivity and political outcomes (such as voting).

Overall, the results have several important implications. As the use of new media grows, the characteristics of new media become more important. Based on the outcomes of this study, it seems that using Twitter, and the style used in the communication on this platform, has consequences. Twitter does not only offer political candidates a platform for direct and more personalized communication, but Twitter also affects electoral support. Thereby, this study demonstrates that the persuasive effects of new media can be very consequential. This leads inevitably to the question to what extent these effects are desirable. On the one hand, it can be argued that if political tweets only persuade voters,

instead of informing them (Huber & Arceneaux, 2007), the effects of Twitter may have negative consequences for democracy. On the other hand, candidate's tweets may not be able to persuade voters to vote for a completely different party. It is more likely that voters still vote for the same party, but then for a different candidate. So, to conclude, the results of this study answers a fundamental question about the effectiveness of online political campaigning: Using Twitter matters, especially when it is used in an interactive way.

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