Unraveling the effects of active and passive forms of political Internet use: Does it affect citizens’ political involvement?

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Abstract
In the time since the rise of the Internet, it has often been claimed that it has the potential to contribute to the quality of democracy by fostering citizens’ involvement in politics. So far, empirical evidence regarding this purported effect has been mixed, and many questions about the consequences of specific forms of political Internet use (PIU) have remained unanswered. This study expands the knowledge about the relation between PIU and political involvement by examining the effect of active and passive forms of PIU on citizens’ political involvement: more specifically, interest and voter turnout during election times. The results obtained from a panel study of a representative sample of the Dutch population ($N = 985$) reveal a positive relation between particular forms of PIU on the one hand and voter turnout and political interest on the other hand. In addition, for two specific forms of PIU, the positive effect on voter turnout is more prevalent for citizens who exhibit lower levels of political interest.

Keywords
Active forms, election, Internet, panel survey, passive forms, political interest, political involvement, voter turnout

The use of the Internet in the communication of politics has increased tremendously. During the past decade, political parties and elected representatives have used the Internet to inform citizens and party members about their plans, points of view, and daily
business. Online communication is considered an important element of a successful election campaign. The Internet offers easy access to political information, providing all kinds of opportunities for citizens to participate in political debates and for politicians to communicate interactively with voters. It is no surprise that several scholars argue the Internet has the potential to contribute to the quality of democracy by fostering citizens’ involvement in politics (De Vreese, 2007; Shah et al., 2005; Tedesco, 2007; Tolbert and McNeal, 2003; Wang, 2007).

Despite these optimistic views, communication research suggests that the actual number of citizens who use the Internet as a source of political communication (e.g., through party websites or Twitter) is still rather limited (Hindman, 2009; Rainie and Smith, 2012) and that this group mostly includes “those citizens who are already pre-disposed or interested in politics” (Boulianne, 2009: 194). According to this point of view, the Internet will not encourage new citizens to become more politically involved; rather, it engages citizens who are already interested (Bimber, 2003). This phenomenon is often referred to as reinforcement (Boulianne, 2009, 2011; Hirzalla et al., 2011; Norris, 2001; Ward et al., 2003). However, the empirical evidence for such claims is mixed, and questions about the effects of Internet use remain unanswered. In particular, studies that examine specific forms of Internet usage are relatively scarce (Nielsen, 2011). In prior work, Internet use in general has often been measured (Kenski and Stroud, 2006; Shah et al., 2005), or online news use has been analyzed (Boulianne, 2011; Shah et al., 2007). However, scholars note that it is important to employ detailed measures of Internet use, including actions such as following a party on Facebook or emailing a politician, rather than considering overall Internet (news) use (Nielsen, 2011). The existing literature shows that specific forms of Internet usage have a positive influence on offline political participation (Dimitrova et al., 2011) and social capital (Shah et al., 2001). For that reason, in the present study, we will examine the effect of different forms of Internet usage. These forms of Internet use differ in the extent to which they are active (i.e., they involve participation) or passive (e.g., they entail reading and consuming information; see Bakker and de Vreese (2011) for a similar distinction). The central question of this study is as follows: What are the consequences of active and passive forms of political Internet usage for political involvement (i.e., political interest and voter turnout) during an election period? By employing a panel study with two waves, we can investigate such relationships more realistically (Eveland and Morey, 2011).

The pessimists versus the (moderate) optimists

In the time since the rise of the Internet, various claims about the relationship between Internet usage and political involvement have been made. Scholars disagree about the impact of the Internet on citizens’ engagement in political activities (for an overview, see Boulianne, 2009). The debate presents a wide range of optimistic as well as skeptical claims about the effects of Internet usage. Optimistic scholars assert that the Internet has the potential to increase political involvement among citizens (for an overview, see Boulianne, 2009; Kenski and Stroud, 2006; Moy et al., 2005). The argument is that the variety of sources available online, combined with the lower costs of obtaining the
information about candidates and the election, encourages citizens to learn more about politics and thus increases their engagement in politics (Shah et al., 2005; Wang, 2007). This mechanism is often defined as mobilization (Norris, 2001). As well as scholars who confirm the positive effects of PIU, there are those who claim that the Internet only has a positive effect for those citizens who are already interested in politics. Citizens who are not “engaged in the political process” are left behind (Boulianne, 2009; Hindman, 2009; Norris, 2001). This viewpoint implies that politics online “mirrors traditional patterns” and is essentially “politics as usual” (Davis, 1999; Hindman, 2009; Margolis and Resnick, 2000; Weber et al., 2003). This view is commonly referred to as the normalization or reinforcement thesis (Boulianne, 2011; Hirzalla et al., 2011; Norris, 2001).

Overall, a considerable debate centers on the question of the extent to which the Internet can contribute to the quality of democracy by fostering citizens’ political involvement (Dahlgren, 2005). The empirical evidence is mixed, potentially due to the scarce systematic evidence about specific forms of Internet usage. Besides, we can infer even less about the actual consequences of specific forms of PIU. In the current study, we investigate the relationship between specific forms of PIU and political involvement. We examine the effect of both active and passive forms of PIU.

Understanding involvement

Before we introduce the specific hypotheses of this study, we must define political involvement and indicate how it has been operationalized and assessed in previous studies. Many scholars mention that political involvement can take a wide variety of forms (Alesina and Giuliano, 2011; Delli Carpini, 2004; Sylvestre and McGlynn, 2010). According to Delli Carpini (2004), involvement can be defined as having democratic norms and values (e.g., political interest), having political attitudes and beliefs (e.g., an ideological orientation), or exhibiting actual political behavior (e.g., voting). Likewise, Weaver (1996) emphasizes that exposure to (newer) forms of media increases general interest in campaigns and intention to vote – the aspect of political involvement most often studied (Donovan et al., 2009; Solt, 2008; Verba et al., 1995). We focus on the two latter types of political involvement: political interest and voter turnout.

Unlike voter turnout, political interest is often used as a strong predictor of many important types of political behavior because people’s political interest is considered to be highly stable over time (Prior, 2010). From this viewpoint, it would seem that political interest determines whether citizens will be politically active (Verba et al., 1995). However, other scholars point out that the direction of causality of this relationship is more complicated. Verba et al. (1995: 276) emphasize that “[p]olitical interest … probably lead to political activity but, presumably, participating in politics also enhances political interest.” This notion is supported by recent studies. Wang (2007) found that Internet use promotes political interest and makes citizens more likely to participate in politics. Strömbäck and Shehata (2010) found that attention to political news was strongly associated with political interest, and they stress that this relation is both causal and reciprocal. Likewise, Boulianne (2011) found that online news stimulates political interest.
It seems that different processes are at work for different media and that PIU may not only be determined by political interest, but may also foster political interest and political behavior. Still, empirical assessments of the causal relation between online media use and political interest are rare, and the results seem to conflict. Moreover, the dependence on cross-sectional data makes it difficult to test for the direction of this relationship. In the current study, we will address the issue of this causal relationship. Using panel data with two waves, we can examine whether political interest motivates specific forms of PIU and not vice versa.

Two forms of political Internet use

Prior work within political communication research differentiates Internet usage along the lines of active and passive forms of political Internet usage (Bakker and De Vreese, 2011; Dimitrova et al., 2011; Kushin and Yamamoto, 2010). Active Internet usage incorporates functions that enable interactive or two-way communication, such as participating in online political discussions (derived from the literature on interactivity; Gibson and Cantijoch, 2011; Tedesco, 2007), and passive Internet usage consists of functions that only involve one-way communication, such as reading political information online. Scholars working in the field of persuasive communication make a similar distinction between active and passive forms of Internet usage. Active Internet usage is defined as creating or contributing to online content (e.g., writing online comments or engaging in online conversation on social network sites) and passive Internet usage is defined as consuming online content (e.g., reading online comments or viewing online videos; Muntinga et al., 2011). Furthermore, the educational literature distinguishes between passive interaction (reading online discussions) and active interaction (participating in online discussions; Rovai and Barnum, 2003).

If we turn to the effects of different forms of PIU, the current literature shows that active forms seem to have a bigger impact on political outcome variables than passive forms of PIU. For instance, Hardy and Scheufele (2006) found that the effect of searching information about politics online on political behavior was stronger for people who used computer-mediated interactions (chatting) than for people who use the Internet in a more passive way. De Zúñiga (2009) found that more active use of blogs (i.e., commenting and publishing) predicts political participation better than passive use of blogs (i.e., reading blogs). Furthermore, Kushin and Yamamoto (2010) found that online expression on social media was related to political involvement, while general attention to social media was not. Finally, Dimitrova et al. (2011) found that the use of political party websites and social media have a stronger effect on political participation than the use of online news sites. They argue that political websites (which incorporate interactive and mobilization functions) and social media (which often connect and involve citizens) are more likely to encourage citizens to become politically active than online news websites (which often involve reading information online).

The underlying mechanisms that explain the positive effects of active forms of PIU can be found in the literature on interactivity. Interactivity can be defined as two-way communication: one citizen can communicate directly with another citizen, politician, or system, and vice versa (Tedesco, 2007). Interactivity is a key characteristic to study the
effects of online political communication and is an important component of active PIU (Sundar et al., 2003). Active PIU involves engaging citizens to participate in two-way communication with others (e.g., a forum) or with a system (e.g., donating-money buttons on websites). Passive PIU involves one-way communication (e.g., reading online information).

Previous literature has shown that interactive online communication encourages citizens to become more cognitively involved in politics or elections (Kushin and Yamamoto, 2010), as participation in an interactive environment presents citizens with a civic role: they feel closer to politics, feel that politics is present and accessible (Bucy and Gregson, 2001; Kruikemeier et al., 2013; Lee and Shin, 2012). In other words, interactive communication stimulates citizens to process the information more meaningfully, because it helps them to make sense of this information (Hardy and Scheufele, 2006). Increased cognitive involvement will enhance learning (Rovai and Barnum, 2003) and may consequently lead to an increase of political involvement. Previous work supports these theoretical considerations. For example, Tedesco (2007) found that people who are exposed to highly interactive political websites, compared to people who are exposed to low interactive websites, value voting as a more important activity. Likewise, Lee and Shin (2012) found in an experimental study that exposure to politicians’ interactive tweets induced the feeling that a politician was “present,” which consequently was positively associated with stronger vote intentions for that specific politician.

To sum up, previous work seems to support the notion that more active forms of political Internet use affect citizens’ political involvement more strongly than more passive forms. Following the interactivity literature, we define active forms of PIU as having features that enable two-way communication (either interactive or mobilization features) and passive forms of PIU as having features that enable one-way communication (often reading political information or political news). Active forms of PIU are activities such as filling out Vote Advice Applications, writing comments, participating in political activities on social network sites and online political discussion, signing online petitions, forwarding political e-mails, videos or links, or chatting about politics. Passive forms of PIU are reading online news, visiting party websites, reading comments, and following political activities on, for example, social networking sites. Hence, we hypothesize the following:

**Hypothesis 1a**: Active forms of PIU have a stronger positive effect on citizens’ interest in politics than passive forms of PIU.

**Hypothesis 1b**: Active forms of PIU have a stronger positive effect on voter turnout than passive forms of PIU.

Furthermore, we expect a positive interaction effect of PIU and political interest on voter turnout. More specifically, we expect that the effect of PIU on citizens’ political behavior (i.e., voter turnout) will be modified by political interests. This expectation stems from the reinforcement literature. Within this line of research, it is often claimed that politically interested or active citizens have more resources (civic skills) that allow them to benefit from the advantages provided by the Internet (Best and Krueger, 2005). In other words, the Internet will mainly affect those citizens who are already politically
sophisticated and will have less of an effect on those who are not. This dynamic will widen the gaps between the more and less politically sophisticated citizens (Bimber, 2001, 2003; Margolis and Resnick, 2000). Some empirical evidence supports these theoretical claims. For example, in an experimental study, Eveland et al. (2004) find that more sophisticated citizens are more likely to take advantage of the Internet in this regard. Furthermore, Xenos and Moy (2007) find that the effect of online political information exposure on civic and political participation was enhanced for citizens with higher levels of political interest. Online information exposure is, as we operationalized it, a passive form of PIU. So it seems that these scholars found a moderating effect for a more passive form of PIU. It is, however, not known whether such a moderating role exists for more active forms of PIU; although, based on the notion that passive forms of PIU are moderated by political interest, it is likely that this also applies for more active forms of PIU.

On the contrary, it could also be the case that for politically interested citizens, it does not make a difference whether they use active or passive forms of PIU. This can be explained by the fact that political interest is generally so powerful that a single activity in an active form of PIU is not able to influence voting intentions. Politically interested citizens are more likely to have higher voting intentions in any case. Participation in an active form of PIU does not make a difference for those citizens. Following this line of reasoning, it is more likely that less interested citizens will benefit from active forms of PIU, because using active forms of PIU may have a mobilizing impact on them, while highly interested citizens are already mobilized.

To sum up, on the one hand, it could be the case that both passive and active forms of PIU have a stronger effect on voting intention for citizens with higher levels of political interest than only passive forms. On the other hand, it might also be that for active forms of PIU a contradictory effect will occur – less interested citizens will benefit more from active forms of PIU. However, due to the lack of empirical research into the moderating effects of political interest on both active and passive forms of PIU, the following research question is formulated:

**Research Question 1**: Does political interest moderate the relationship between both active and passive forms of PIU and voter turnout, and if so, in what ways?

**Method**

To examine the effects of passive and active forms of PIU, we used a national panel survey of a representative sample of the Dutch population. We conducted the current study in the context of the 2010 Dutch national elections. In the Netherlands, 91% of Dutch households had access to the Internet at home in 2010 (CBS, 2011); Internet use was common in the Netherlands at that time.

In recent years, many studies have focused on high-profile cases in the United States context (e.g., the Obama election, Baumgartner and Morris, 2010; Kim, 2011; Zhang et al., 2010). However, evidence shows that “across Western democracies, differences in media environments … play an important role in shaping individual news behaviour” (Shehata and Strömbäck, 2011: 127). Investigating the effects of PIU in a European context...
country with a different political system and media landscape may help to generalize the results to a broader context (De Vreese and Semetko, 2002).

The study was carried out in the spring of 2010, the period leading up to the Dutch national election. The survey consisted of two pre-election waves and was part of a longitudinal study that was designed to examine the public opinion of Dutch citizens about various public issues. The online questionnaires (respondents were invited by email) were distributed approximately nine weeks and two weeks prior to the election. The respondents were sampled from the TNS NIPO database, which contains approximately 200,000 persons and is representative of the adult Dutch population. The panel was recruited using a variety of methods, including face-to-face, telephone, and online recruitment. The panel that we used is representative and respondents were randomly selected. The response rates for the two waves were 78.8% and 79.3% (recontact rate), respectively (calculated according to the AAPOR guidelines; AAPOR, 2011), and 985 respondents participated in both waves. Respondent rates were high, because the respondents in the panel were registered and received incentives when participating.

**Measures**

**Voter turnout.** Voter turnout was measured by asking the respondents, “If the parliamentary elections were held today, would you vote, and if so, for which political party would you vote?” The answers were dichotomized as follows: (0) “intention not to turn out to vote” and (1) “intention to turn out to vote” (no intention to vote wave 1 = 7.3%, intention to vote wave 1 = 92.7%; no intention to vote wave 2 = 6.1%, intention to vote wave 2 = 93.9%). We are aware that due to our use of self-reported measures, the variable voter turnout may have been affected by over-reporting (the actual turnout for the 2010 Dutch national elections was 74%). In the questionnaire, the respondents had the opportunity to answer “no voting rights,” “I do not want to say,” or “do not know.” These latter answers were recoded as missing.

**Political interest.** Political interest was assessed based on responses to the statement “Politics in general interests me,” which were coded using a 7-point scale where 1 equals “totally disagree” and 7 “totally agree” (Mwave 1 = 4.06, SD = 1.80; Mwave 2 = 4.16, SD = 1.76).

**Political Internet use.** There are various ways to measure PIU. We chose to consider a wide array of possible political Internet activities which are important during election times. As noted earlier, we aim to improve the linkage between use and effects by providing detailed measures of usage. To develop these detailed measures, we consulted previous research that addresses the political content of the Internet (Utz, 2009; Vliegenthart and Van Noort, 2010; Walgrave et al., 2008). Based on the existing literature, we included 11 different types of PIU. These types included the most important political activities that (to our knowledge) were available during the 2010 Dutch national elections, including activities that are both active and passive in nature.

**Passive forms of PIU.** First, online news use consisted of 15 items that asked the respondents how often they visited a news website during an average week. We combined these
questions by taking the average scores for each of the 15 items, generating an index for online news use ($\alpha_{wave \ 1} = .73, M = 1.58, SD = 0.70; \alpha_{wave \ 2} = .74, M = 1.55, SD = 0.69$). Second, the variable visiting political websites was constructed from seven items that asked the respondents how often they visited the best-known Dutch party websites. An index was constructed by averaging the scores for these items ($\alpha_{wave \ 2} = .91, M = 1.12, SD = 0.49$). Third, the respondents could indicate how often they read comments on online news articles related to political issues, using an 8-point scale ranging from “never” to “almost every day.” The answers generated the data for the measures reading comments about politics on online news sites ($M_{wave \ 1} = 2.37, SD = 2.02; M_{wave \ 2} = 2.34, SD = 2.02$). Fourth, the respondents were able to indicate how often they follow or actively participate in activities on social network sites (SNS) that deal with political issues. Again, the responses were recorded on an 8-point scale ranging from “never” to “almost every day.” These responses yielded the data for the measures following activities about politics on SNS ($M_{wave \ 1} = 1.39, SD = 1.14; M_{wave \ 2} = 1.35, SD = 1.14$).

**Active forms of PIU.** First, the variable using Vote Advice Application (VAAs) was assessed based on responses to the following question: “Did you use the VoteMatch [Stemwijzer] application on the Internet for this election?” ($No_{wave \ 2} = 74.3\%, Yes_{wave \ 2} = 25.7\%$). VAAs are active online political activities; they let the user interact with the website, and direct feedback (“stemadvies”) is provided by the application. Second, writing comments about politics on online news sites ($M_{wave \ 1} = 1.21, SD = 0.79; M_{wave \ 2} = 1.19, SD = 0.76$) and participating in activities about politics on SNS ($M_{wave \ 1} = 1.19, SD = 0.80; M_{wave \ 2} = 1.17, SD = 0.73$) was measured. The third measurement was constructed from two items that asked the respondents whether or not they followed politicians on Twitter and whether or not they tweeted about political issues. The answers were dichotomized to indicate political Twitter use, where 0 equals “did not use Twitter for politics” and 1 equals “used Twitter for politics” (inter-item correlation $\alpha_{wave \ 2} = .37, M = 0.04, SD = 0.20$). Last, we included four dichotomized measures: signing an online petition ($M_{wave \ 2} = 0.04, SD = 0.20$); forwarding an email, video or link containing political content ($M_{wave \ 2} = 0.03, SD = 0.18$); chatting about politics ($M_{wave \ 2} = 0.03, SD = 0.17$); and participating in an online discussion about politics ($M_{wave \ 2} = 0.04, SD = 0.19$).

**Control variables.** Several studies that explored Internet use and political (or civic) involvement found that demographics play a role in influencing involvement levels (Moy et al., 2005). In all of the analyses presented in this study, we controlled for gender (coded as female), age (in years), education (on a 7-point scale where one equals low educational level and seven equals high educational level), trust in politics and offline news use. Variables for offline news use were newspaper reading, public television news viewing, and commercial television news viewing.

**Analysis**

The specific regression models used in this paper were ordinary least squares multiple linear regressions and logistic regressions for the dichotomous measures. We included
lagged dependent variables (i.e., initial political interest and previous intention to vote in wave 1) as predictor variables in our model to test the causal relationships. These lagged variables enable us to control for initial political interest level and habitual voting. (For an overview of the use of causal lags in analyzing panel data, see Finkel, 1995; Markus, 1979.)

The sampling distributions of certain variables in our data were highly skewed, which makes parametric methods unsuitable for use. The Jackknife procedure can be used to overcome these difficulties (Potvin and Roff, 1993). The Jackknife procedure is a resampling method that is similar to bootstrapping. It entails omitting one case from the total sample at a time \((N – 1)\) and conducting separate analyses for the reduced sample (Rutten and Gelissen, 2008). This procedure is repeated until all possible samples have been analyzed. Using the Jackknife estimator, we can eliminate possible bias from our analyses. For an overview of the relevant theory and the motivations for using the Jackknife procedure and other similar ones, see Miller (1974) and Efron (1982).

Results

We first identified how many citizens use the Internet for political communication (Table 1). Overall, the results listed in Table 1 indicate that although Internet use for political purposes is rather uncommon (except for reading online news), some online political communication tools are more popular than others. Because the majority of citizens do not use the Internet for political purposes, those citizens will not be mobilized to become politically active online. In addition, we also determined which citizens actually participate online. Does online political communication mobilize new citizens, or does it reinforce existing patterns of political engagement? Based on regression analyses with the various forms of PIU as dependent variables, it seems that the latter is the case: those who are more interested in politics, who are younger, and who use online news more often are more likely to be politically active online (specific results of these analyses can be provided upon request).

We now turn to our hypotheses and our research question. To test hypothesis 1a, which predicts that active forms of PIU have a stronger positive effect on citizens’ interest in politics than passive forms, we performed an OLS regression. The results are presented in Table 2, in the first column. Table 2 shows that reading comments under an online news article about a political issue is related to increased political interest. This finding is significant when we control for socio-demographics, individual characteristics, and offline news use and political interest earlier in the election. The other forms of PIU did not have a significant effect on political interest. Although we found that one specific form of PIU had an effect on political interest, the findings do not support hypothesis 1a.

To test hypothesis 1b, which predicts that active forms of PIU have a stronger positive effect on voter turnout than passive forms, we performed a logistic regression. We found minimal support for hypothesis 1b. The second column in Table 2 shows that the use of VAAs was a significant positive predictor of voter turnout, even when we control for vote intention earlier in the election. Again, the other forms of PIU did not have a significant positive effect on voter turnout. However, we also found that writing comments had a negative effect on voter turnout. It might be that citizens who write comments are more
cynical towards politics and are therefore less likely to vote. Overall, it seems that both active and passive forms of PIU can have an effect on political involvement.

To examine research question 1, we performed logistic regressions in which we included interaction terms between the specific forms of PIU and political interest. The significant results are presented in Table 2 in the third and fourth columns. In most instances, there was no different effect of PIU for people with different levels of political interest. We found two significant results that improved the fit of our model (see Table 2, models b and c), both of which suggested a negative interaction effect between the specific form of PIU and political interest on vote intention.

Given the significance of these two results, the effects were interpreted following Aiken and West (1991) and Dawson (2013). The relation between the specific form of PIU and voter turnout is plotted at high (7) and low (1) values for political interest, while the other independent variables remain constant at their means. This approach provides a visual indication of the directions of the slopes. Based on these analyses, we found that less interested people are more likely to vote if they read more comments posted in online political articles and used Twitter for political purposes. In other words, if a citizen has lower levels of political interest and does not often read comments online, his/her

Table 1. Descriptives and change in political Internet use in percentages.

<table>
<thead>
<tr>
<th></th>
<th>Wave 1 (N=1242) (%)</th>
<th>Wave 2 (N=986) (%)</th>
<th>Change during the campaign (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passive forms of political Internet use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online news use</td>
<td>73.0</td>
<td>68.9</td>
<td>−4.1</td>
</tr>
<tr>
<td>Reading comments posted on an online political news article</td>
<td>25.9</td>
<td>25.0</td>
<td>−0.9</td>
</tr>
<tr>
<td>Follow activities about politics on SNS</td>
<td>6.8</td>
<td>5.9</td>
<td>−0.9</td>
</tr>
<tr>
<td>Visiting a party website</td>
<td>14.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Following a politician on Twitter</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Active forms of political Internet use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posting comments on an online political news article</td>
<td>3.7</td>
<td>3.2</td>
<td>−0.5</td>
</tr>
<tr>
<td>Participating in activities about politics on SNS</td>
<td>3.1</td>
<td>2.1</td>
<td>−1.0</td>
</tr>
<tr>
<td>Vote Advice Application (VAA)</td>
<td>25.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signing an online petition</td>
<td>4.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in an online discussion about politics</td>
<td>3.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forwarding an email, video or link containing political content</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chatting about politics</td>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tweeting about a political issue</td>
<td>1.7</td>
<td></td>
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</tbody>
</table>

Note. aOnce per month or more often.
Table 2. Explaining the effects of different forms of PIU on political interest and voter turnout.

<table>
<thead>
<tr>
<th></th>
<th>Political interest in wave 2</th>
<th>Voter turnout in wave 2 (model a)</th>
<th>Voter turnout in wave 2 (model b)</th>
<th>Voter turnout in wave 2 (model c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B^b$ (SE)</td>
<td>$B^a$ (SE)</td>
<td>$B^a$ (SE)</td>
<td>$B^a$ (SE)</td>
</tr>
<tr>
<td>Constant</td>
<td>.38 (.29)</td>
<td>-9.40 ** (2.79)</td>
<td>-10.39 *** (2.86)</td>
<td>-11.58 *** (3.46)</td>
</tr>
<tr>
<td>Control variables (not displayed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive forms of political Internet use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online new use</td>
<td>.04 (.06)</td>
<td>.21 (.62)</td>
<td>.00 (.61)</td>
<td>.39 (.67)</td>
</tr>
<tr>
<td>Visiting political websites</td>
<td>- .03 (.05)</td>
<td>.29 (.59)</td>
<td>.42 (.66)</td>
<td>.56 (.94)</td>
</tr>
<tr>
<td>Reading political comments</td>
<td>.07*** (.02)</td>
<td>.15 (.25)</td>
<td>.92† (1.50)</td>
<td>.07 (.27)</td>
</tr>
<tr>
<td>Following political activities on SNS</td>
<td>.04 (.05)</td>
<td>.81 (1.17)</td>
<td>1.13 (1.22)</td>
<td>1.29 (2.17)</td>
</tr>
<tr>
<td>Active forms of political Internet use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote Advice Application</td>
<td>.10 (.08)</td>
<td>2.82* (1.35)</td>
<td>2.86* (1.36)</td>
<td>3.09* (1.41)</td>
</tr>
<tr>
<td>Writing political comments</td>
<td>.03 (.04)</td>
<td>-.91* (1.35)</td>
<td>-.69 (1.44)</td>
<td>-.65 (.57)</td>
</tr>
<tr>
<td>Participating in political activities on SNS</td>
<td>-.09 (.07)</td>
<td>-.59 (1.36)</td>
<td>-.97 (1.40)</td>
<td>.00 (2.97)</td>
</tr>
<tr>
<td>Twitter use for politics</td>
<td>-.05 (.19)</td>
<td>.75 (1.40)</td>
<td>.49 (1.39)</td>
<td>15.58* (9.76)</td>
</tr>
<tr>
<td>Signing an online petition</td>
<td>.01 (.15)</td>
<td>.87 (1.72)</td>
<td>-.93 (1.78)</td>
<td>.12 (2.19)</td>
</tr>
<tr>
<td>Participating in online political discussion</td>
<td>-.18 (.17)</td>
<td>-1.00 (1.97)</td>
<td>-1.07 (2.04)</td>
<td>-1.37 (2.33)</td>
</tr>
<tr>
<td>Forwarding political email, video or link</td>
<td>.07 (.19)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chatting about politics</td>
<td>.21 (.17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political interest (wave 1)</td>
<td>.72*** (.03)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political interest (wave 2)</td>
<td></td>
<td>.24 (.22)</td>
<td>.63* (.30)</td>
<td>.31 (.23)</td>
</tr>
<tr>
<td>Voter turnout (wave 1)</td>
<td>4.60*** (.71)</td>
<td>4.52*** (.69)</td>
<td>4.62*** (.71)</td>
<td></td>
</tr>
<tr>
<td>Political interest × Reading political comments</td>
<td></td>
<td>-.19* (.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political interest × Twitter use for politics</td>
<td></td>
<td></td>
<td>-3.44* (1.66)</td>
<td></td>
</tr>
<tr>
<td>Adjusted $R^2$/Nagelkerke Pseudo $R^2$</td>
<td>.69</td>
<td>.67</td>
<td>.68</td>
<td>.69</td>
</tr>
<tr>
<td>$N$</td>
<td>932</td>
<td>818</td>
<td>818</td>
<td>818</td>
</tr>
</tbody>
</table>

Note. The model including the interaction between political interest and VAAs, as well as the predictor variables forwarding an email, video, or link about politics and chatting about politics, could not be estimated due to extreme high correlation. *Logistic Regression $^a$Unstandardized (B) coefficients $^c$Standard Errors reported in cell entries were calculated using a Jackknife estimator. $^p < .10$ $^*p < .05$ $^{**}p < .01$ $^{***}p < .001$. For simplicity of presentation, the coefficients for the control variables and non-significant interaction effects are not displayed; these results are available upon request.
predicted voter turnout will be 0.984. If a citizen has a lower level of political interest and more often reads comments online, his/her predicted voter turnout increases to 0.999 (see Figure 1). Although the increase in voter turnout may seem marginal, the effect on citizens’ political involvement partly contradicts our expectations.

**Discussion and conclusion**

In this paper, we expanded the knowledge about the effect of specific forms of PIU on citizens’ political interest and voter turnout during elections. First, in line with earlier studies, we found that few citizens participate in politics online. Some forms of political Internet usage are more popular than others, and those people who use the Internet for such purposes are often those who are already engaged in politics. This result, however, does not mean that the effects of PIU during elections are insignificant. Even if just 5% of the electorate uses a particular form of online communication, this percentage is still considerable. If such voters can be mobilized, they can have a substantial impact on turnout rates and election results (Bond et al., 2012; Gibson and McAllister, 2011). In addition, the Internet is still developing, and many forms of online political communication remain experimental (Hindman, 2009). Future technological improvements and the use of newer forms of online political communication may have an even stronger effect on citizens’ political involvement.

Second, the data show that the use of only a few specific forms of PIU has a positive effect on political interest and voter turnout. More specifically, the results indicate that citizens who use an online Vote Advice Application or read the comments below online political articles during the election period are more likely to vote or to feel more interested in politics than those who do not. These findings seem to underline the claim that some specific forms of Internet usage have a positive effect on interest and political behavior (Boulianne, 2009), and are consistent with recent studies that analyze the effect of Internet use on political interest (Boulianne, 2011;
However, we also found that citizens who write political comments are less likely to vote. It may well be that these citizens are more cynical about politics, especially because these comments are often negative and sarcastic in nature. Thus, overall, it seems that the effects of PIU are diverse and can be negative as well.

The findings show that the effects of PIU on citizens’ involvement may be best understood by examining specific forms of Internet use. We demonstrate that some online political media uses have an effect, whereas others do not. Both active and passive forms of PIU have a positive effect on political involvement. This suggests that certain characteristics, elements (e.g., interactive features), or styles of content matter more than whether the activities are passive or active in nature. It might well be that these specific features or the content characteristics (e.g., the amount of interactivity) of these online applications mobilize citizens to vote. Regarding the VAAAs, it is possible that the voting advice stimulates users to vote. Therefore, we argue that it is important not only to consider the usage of content but also to consider the content-specific factors in investigating the effects of Internet use on citizen involvement. Future research needs to investigate which content characteristics are important.

In addition, we did not find that the positive effect of both active and passive forms of PIU on political participation is more prevalent for citizens with higher levels of political interest. Instead, for two specific forms of PIU, we observed the opposite: the positive effect of these two forms of PIU (i.e., reading comments on online political news articles and Twitter use for political purposes) on voter turnout is more prevalent for less politically interested citizens. Traditionally, research has claimed that politically interested or active citizens have more resources (civic skills) and thus can better benefit from the advantages provided by the Internet (Best and Krueger, 2005). Given that our results showed that less interested citizens can be better mobilized by reading political comments and using Twitter for political purposes, it seems that due to technological developments and growing experience with the Internet, the resource argument is becoming less relevant. “Resource-poor” citizens are perhaps more likely to benefit from the Internet, whereas those citizens who are “resource-rich” do not benefit more from the Internet. This is also in line with the notion that political interest is generally so powerful that PIU is not able to influence the voting intentions of politically interested citizens. It is more likely that less interested citizens will benefit from different forms of PIU because they can be mobilized, while highly interested citizens are already mobilized. Future investigation of this notion, and the moderating role of political sophistication, is strongly recommended.

Furthermore, one reason why using Twitter and reading comments affects citizens with low interest is that both forms show citizens the interactions between politics and their voters. Though Twitter use and reading comments do not represent (inter)active usage, being exposed to interactions between politics and voters may have positive effects on perceived interactivity. Since previous research has shown that interactivity leads to positive effects on citizens’ political engagement, it is very likely that interactivity is the underlying characteristic that drives the effects. The rough subdivision of active/passive is therefore too generic. Future research should concentrate on investigation of the underlying characteristics of new media and the moderating role of political sophistication. It is again suggested that the content-specific factors seem to be more important.
This supposition, however, requires further examination, especially because our results only provide limited evidence for the contingency of PIU effects on political interest, since most of the interactions we tested turned out not to be significant.

Regarding our results, it should be noted that due to over-reporting, the distribution of the variable voter turnout is skewed. This bias may have an impact on the apparent effect of other variables on voter turnout (Bernstein et al., 2001). Although over-reporting is a common phenomenon in election studies (Katosh and Traugott, 1981), we could not include actual voter turnout in our analyses. Including actual turnout might bolster our analyses and provide us with more convincing evidence of the effects of PIU.

This limitation notwithstanding, in the broader debate regarding the effects of Internet use, our study has provided new input into the types of effect that specific forms of PIU have, and for whom. We found not only that political involvement determines whether citizens use the Internet for political purposes, but also (and more importantly) that some forms of PIU may foster political involvement. We propose that previously unengaged citizens are more likely to be engaged if they use specific forms of online communication for political purposes, which will encourage them to become more politically engaged and provide them with more political content. We suspect that those citizens will become more involved through that exposure. Thus, these “new” forms of political communication also engage “new” citizens.

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Notes
1. Unlike the United States and other countries, Dutch political parties and politicians have no tradition of seeking campaign donations. Therefore, we focus on communication and information distribution as the main Internet influence.
2. The specific dates were as follows: wave_1 8–14 April 2010 and wave_2 26–31 May 2010.
3. We explored whether considering the respondents who answered “no voting rights,” “I do not want to say” or “don’t know” differently would yield different results by conducting a multinomial logistic regression analysis where group 1 equals not voting; group 2 equals no voting rights, don’t know, or would not say; and group 3 equals voting. The distribution of the groups was as follows: 5.7%, 7.4%, 86.9%. These results are not substantially different from those presented in this paper for the voters/non-voters distinction. For the sake of clarity, we therefore decided to use the dummy variable.
4. We performed a factor analysis using a polychoric correlation matrix to examine whether the conceptualization between active and passive forms of PIU can be found in the data (see Kolenikov and Angeles, 2004). This specific factor analysis can be used when variables are measured at different levels. The factor analysis revealed the presence of one component with eigenvalues exceeding 1, explaining 75% of the variance. Apparently, all activities are related and the underlying constructs were not found in the data.
5. VAAAs are online applications that present users with a series of questions or statements about their political preferences. After a user fills out an online questionnaire, the VAA automatically determines which political party best matches the preferences or views of the user and subsequently gives the user voting advice (Walgrave et al., 2008)
6. We also included questions asking whether or not the respondent participated in the following
offline campaign activities: this resulted in the variable offline political participation. A cross-
table, however, revealed that citizens who participated offline always vote and are politically
interested. This finding indicates that this variable does not help to predict political engagement.
Therefore, offline political participation was not used as a control variable in the analysis.

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