



UvA-DARE (Digital Academic Repository)

Mobilizing youth in the 21st century: How digital media use fosters civic duty, information efficacy, and political participation

Moeller, J.; Kühne, R.; De Vreese, C.

DOI

[10.1080/08838151.2018.1451866](https://doi.org/10.1080/08838151.2018.1451866)

Publication date

2018

Document Version

Final published version

Published in

Journal of broadcasting & electronic media

License

Article 25fa Dutch Copyright Act

[Link to publication](#)

Citation for published version (APA):

Moeller, J., Kühne, R., & De Vreese, C. (2018). Mobilizing youth in the 21st century: How digital media use fosters civic duty, information efficacy, and political participation. *Journal of broadcasting & electronic media*, 62(3), 445-460.
<https://doi.org/10.1080/08838151.2018.1451866>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)

Mobilizing Youth in the 21st Century: How Digital Media Use Fosters Civic Duty, Information Efficacy, and Political Participation

Judith Moeller, Rinaldo Kühne, and Claes De Vreese

Youth turnout at European Parliamentary elections has been dwindling. This study investigates the impact of news media exposure on electoral participation of first time voters. Relying on a data set that combines content analysis of news stories about the EU (N = 769) and a multiple wave panel survey (N = 994), we analyze the impact of exposure to online and offline coverage of relevant topics on turnout across a period of 6 months. We find that exposure to news in offline media had no significant effect on participation, whereas exposure to relevant news in online media positively affected turnout.

Democracies depend on informed and engaged citizenries. Consequently, a democracy is not sustainable unless it succeeds in continuously fostering norms, cognitions, and behavioral patterns of involved citizenship in new generations of citizens. The mass media and, in particular, the news media, have played an important role in the democratic process (Chaffee & Kanihan, 1997). Serving as information source and market place of ideas, the news media have been a key agent of political socialization in the last century. However, due to the changing and fragmented media environment in the 21st century, the influence of the media on political participation has changed. Many young citizens choose to avoid political information or selectively attend to only the issues that appeal

Judith Moeller (Ph.D.) is a postdoctoral researcher in the Amsterdam School of Communication Research (ASCoR) at the University of Amsterdam. Her research interests include media effects, political socialization, the affordances of political information use online, and their consequences for the public sphere.

Rinaldo Kühne (Ph.D.) is an assistant professor in the Amsterdam School of Communication Research (ASCoR) at the University of Amsterdam. His research focuses on framing effects, cognitive and emotional processes of learning and attitude change, and the cultivation of adolescents' and emerging adults beliefs and values through media use.

Claes H. De Vreese (Ph.D.) is professor and chair of Political Communication and director of the Program Group Political Communication & Journalism in The Amsterdam School of Communication Research ASCoR at the Department of Communication Science, University of Amsterdam. His research interests include comparative journalism research, the effects of news, public opinion, and European integration, effects of information and campaigning on elections, referendums, and direct democracy.

Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/hbem.

to them (Mindich, 2005). For those young citizens who still choose to expose themselves to general news, the news effect has become conditional upon parameters of information processing—such as conversation about politics with others (Lee, Shah, & McLeod, 2012)—or internal efficacy (Moeller, De Vreese, Esser, & Kunz, 2014).

A major limitation of extant studies is that they assume the aggregate of all news stories will influence youths' political learning and participation, irrespective of the actual content. This study aimed to conduct an in-depth analysis of the differential effects of message content and news media. For this purpose, we collected data sets that combine content analysis and panel survey data among a representative sample of Dutch first-time voters. In particular, we tested whether information relevant to first-time voters influences their mobilization at the elections and how the mode of news use (online and offline) affects mobilization.

European Youth Vote and Information Environment

Turnout across many western democracies has come under pressure (Dalton, 1996). This holds a true especially in the case of European Parliamentary elections. The 2014 European Parliamentary election marked a new low in youth turnout, with 72% of the electorate aged 18 to 24 failing to vote (Directorate-General for Communication Public Opinion Monitoring Unit, 2014). These numbers solidify a general trend towards less political participation among young voters in the European Union, which has raised concerns among scholars and politicians.

In research and public discourse, the lack of democratic participation in the EU is often blamed on the portrayal of the predominantly negative coverage of the EU in the news media (Gleissner, 2005; Michailidou, 2015). Extant studies have shown that exposure to specific news frames can influence vote choice (Van Spanje & De Vreese, 2014). Yet, it is important to keep in mind that coverage specific to EU issues is still not very common; even during election campaigns, only a small percentage of the new media coverage is devoted to EU issues (Strömbäck et al., 2013).

This means that during a typical election campaign, young citizens would hear or see relatively little about the EU and the parliamentary elections in the news media. If the EU is featured in the news, it is most likely in the context of national developments or general economic trends like the Euro-crisis. Most of the news items that discuss European issues in depth concern international relations and abstract economic processes, which is the type of information that is quite distant from the experiences of a young adult. To sum it up, if young voters encounter the EU in the news coverage at all, the information they find is likely to be negative in tone and of very limited relevance to their daily lives.

Towards a Model of News Use Effects on First-Time Voting

Since information processing is essential in media effects (Tedesco, 2007), we argue that a news diet that includes information particularly relevant to young

citizens would be more effective than news stories dealing with issues aimed at the general adult population. In the case of this study this would be news stories that explicitly link EU policy and EU politics with the problems of the younger generation: for example, youth unemployment, education, or regulation of the labor market. News items that mention the citizenry at large—a group that also includes young voters—may be too abstract to support information processing. Accordingly, first-time young voters should be motivated by news content which explains how elections are related to topics that are directly relevant to them.

H_{1a}: Exposure to youth-relevant news content has a positive effect on political participation among first-time young voters.

Digital Media and Information Processing

We expect the effectiveness of youth-relevant content to be even stronger on digital media platforms due to the affordances of online news media. First, online news media cater to younger users' ways of processing news (Holt, Shehata, Strömbäck, & Ljungberg, 2013). Features such as multi-media presentation and interactivity (Kruikemeier, Van Noort, Vliegthart, & De Vreese, 2014) stimulate information processing of all users, but the effects of online news use on younger users are particularly strong. Second, online news use also enables online follow-up communication about the news event on social media, which has been shown to be crucial for information processing (Lee et al., 2012). Third, online news allows users to browse the information quickly and select those messages they want to engage at a deeper level. In the past decennia, there has been a shift from general news use to specific issue-related news use (Norris, 2003). Young news users in particular tend to increasingly focus on staying informed on only a couple of issues, while paying very little attention to the general news (Mindich, 2005). This means that if young citizens encounter information online that is of very limited relevance to them, they may be quick to dismiss the message and move on to the next news item. Conversely, this also means that if a message is particularly relevant to them, they may immediately engage with the message via forwarding it through social media, using the comments section to react, or saving the information to re-read at a later stage. Fourth, online news is typically consumed by young people on personal digital devices such as a mobile phone or laptop, compared to the access to offline news media such as newspapers or TV news that are provided by their parents. We can hence expect that young people who access news through a digital media device are more involved with such news content. This higher level of involvement leads to higher levels of information processing, which increases the effectiveness of the message itself (Lee et al., 2012).

H_{1b}: Exposure to youth-relevant news content on digital media has a stronger positive effect on political participation among first time voters than exposure to youth-relevant news content in traditional news media.

Mediating Processes: Efficacy and Habitualization

To consider the question of whether seeing or reading news stories about the EU is related to the decision to participate in the EU elections, we argue that the relationship is mediated by two factors: the development of information efficacy (*cognitive route*) (Mossberger, Tolbert, & McNeal, 2008) and civic norms (*habitualization route*) (McCombs & Poindexter, 1983). We also anticipate that consuming news about the EU over the period of 6 months should help foster young voters' confidence in their understanding of the EU, in addition to establishing the belief that it is their duty to vote. Hence, both processes, independent of each other, are expected to lead to higher levels of mobilization at the time of the election.

Information Efficacy. Repeated exposure to news over an extended period of time has been found to be instrumental in fostering *internal efficacy*, or the "beliefs about one's own competence to understand and to participate effectively in politics" (Niemi, Craig, & Mattei, 1991, p. 1,408), especially among young citizens (Moeller et al., 2014). As young people use news to inform themselves about current events, they also gain insight into the political processes and the role of political institutions like the parliament in a democratic society (Delli Carpini, 2000; Shah, McLeod, & Lee, 2009). Over time they will become increasingly familiar with various political actors and gain confidence in their ability to compare different candidates for a political election and cast a vote. This feeling of internal efficacy, in turn, is crucial in mobilizing young voters at the day of the election. In fact, feeling competent to cast a vote is one of the most important predictors of turnout among young voters (Kaid, McKinney, & Tedesco, 2007). Given the complexity of the European political system, this factor cannot be underestimated in explaining participation of young voters in European Parliamentary elections.

It is important to keep in mind that the development of this information efficacy is contingent upon several factors. First, the information in the news needs to be related to the information that young citizens already understood (Sotirovic & McLeod, 2004). This information must also be presented in a way that allows young news users to learn about the EU's political system. Second, the level of motivation of news users will condition how much information is retained (Elenbaas, De Vreese, Schuck, & Boomgaarden, 2014). In order to learn from the news they need to follow the news stories attentively and actively process the information they encounter. If these conditions are met, then exposure to the EU news may directly affect young voters' faith in their competences as voters and hence raise their efficacy.

H_{2a}: The relationship of youth-relevant news exposure and political participation is mediated by information efficacy.

Civic Norms and Values. Another process linking exposure to the EU news and voter mobilization runs through the development of civic norms and values. In recent years, the diminishing importance of civic norms has contributed to lower levels of turnout, especially among the young generation (Blais & Rubenson, 2013). Young citizens feel less and less obligated to vote, especially during the European Parliamentary elections that are perceived as secondary elections of little importance. News media use can mitigate this steep decline, as consuming news regularly can foster a sense of civic duty (Boyd, Zaff, Phelps, Weiner, & Lerner, 2011).

This is of particular importance in the period leading up to their first elections. The first elections traditionally have a high socializing effect on citizens. It has been shown, for example, that participation in the first two elections has a high predictive power to explain political participation for a lifetime (Sears & Levy, 2003). Consequently, the period leading up to the first elections is a period in which civic norms are formed and young citizens are highly engaged in developing their political identity. Furthermore, exposure to specific items can often spark discussions about politics that deepen the identification as an interested and active citizen. From this perspective, the habitualization of news use can be understood as a first step in becoming a dutiful citizen. This habitualization process is also conditional upon two parameters: The quality of the information provided in the news and the regularity with which first-time voters are exposed to this information. In order to develop strong civic norms, it is important that the news use is indeed habitual and not incidental.

H_{2a}: The relationship of youth-relevant news exposure and political participation is mediated by the sense of civic duty.

Methods

To investigate the influence of relevant news exposure on political participation, we rely on a four-wave panel survey and a content analysis; these studies were conducted in the context of the European Parliamentary election 2014 in the Netherlands.

Content Analysis

A content analysis was conducted with a sample of national news coverage in The Netherlands. This national news coverage was selected from the following electronic media outlets: (1) the most widely watched national evening news broadcasts from a public (NOS) and a commercial (RTL4) television station; and (2) the most widely used online news Web site (Nu.nl). We also included news coverage from two reputable broadsheet newspapers—*de Volkskrant* and *NRC Handelsblad* (comparable to the *New*

York Times)—in addition to a tabloid newspaper *de Telegraaf* (comparable to the *New York Post*).

The data for the content analysis were selected from December 2, 2013 to May 22, 2014 (the election date); the election-day news items from the newspapers and the online news Web site we included in the sample, but not the evening television news. All relevant news items were collected digitally (TV, newspapers, and online news). With regard to story selection, all news items in the main evening news broadcasts were coded. For the newspapers, any news items that appeared on the title page and on one randomly selected page in the Political/News and Editorial/Opinion/Comment sections were coded. Additionally, we coded all stories that pertained particularly to the EU and/or the European Parliament elections on any other page of the newspaper within the Political/News and Editorial/Opinion/Comment sections. As for the online news source, any articles within the political, domestic and foreign news sections that appear as one of the top five most read articles at least once as well as all stories pertaining particularly to the EU and/or the European Parliament elections were coded. In total, 3,679 news stories have been coded; 769 of these news stories dealt specifically with the EU.

In order to be classified as an EU-related story, the EU or any sort of EU institution, policy, or synonym had to be mentioned at least twice in the story. All stories were coded on the same sub-set of variables; if the story was an EU or EU election story, then coding continued for another, EU-specific sub-set of variables. Relevance to a young audience was measured per news item (Krippendorff's Alpha = 0.8) and operationalized as whether or not the EU-related stories mentioned the problems or issues relevant to young people's concerns.

Survey

The survey was administered by a certified opinion pollster (TNS NIPO), who also selected a representative sample of the Dutch population from its database. For the purpose of this study only young Dutch inhabitants who were never eligible to vote in a national election (age 18 or 19) were invited to participate. Respondents were interviewed about 6 months prior ($N = 1433$), 4 months prior ($N = 1013$), and 1 month prior to the May 2014 election for the European Parliament ($N = 836$), and immediately after the elections ($N = 747$). The survey was conducted in Dutch and measured participants' political participation, media exposure, civic duty, information efficacy, and a series of covariates.

Political Participation. The central dependent variable was political participation. In the final panel wave, participants were asked to indicate whether they had cast their vote in the European Parliamentary election. To reduce social desirability bias and overreporting of voting, face-saving options were included in the answer scale (Belli, Traugott, Young, & McGonagle, 1999). Participants could respond that (1) they did not cast a vote, (2) they intended to vote, but did not vote this time, (3) they generally vote, but did not vote this time, (4) they did vote. The variable was recoded

into a dichotomous variable, with “0” indicating that the participant did not vote and “1” indicating the participant did vote. Of the participants in the final wave, 42.7% indicated that they had voted.

Media Exposure. In the first three panel waves, exposure to the same six news outlets that were covered in the content analysis was assessed (i.e., NRC Handelsblad, Volkskrant, Telegraaf, NOS, RTL, and Nu.nl). Participants were asked about how many days during a week they used each of the outlets. The response scale for each exposure item ranged from 0 to 7 days. The results from the first wave show that while first-time voters only use newspapers irregularly ($M_{NRC} = .13$, $SD_{NRC} = .68$; $M_{Volkskrant} = .20$, $SD_{Volkskrant} = .82$; $M_{Telegraaf} = .46$, $SD_{Telegraaf} = 1.44$), they used the two television channels on a regular basis ($M_{NOS} = 1.79$, $SD_{NOS} = 2.02$; $M_{RTL} = 1.54$, $SD_{RTL} = 2.04$). The most frequently used media channel is the digital news outlet Nu.nl ($M_{Nu.nl} = 2.02$, $SD_{Nu.nl} = 2.54$). This news media exposure pattern is stable across all three waves.

Civic Duty. Civic duty was also measured in the three panel waves. The scale included four items that describe the obligation to partake in the political process and the value of political participation to the individual (Chareka, Sears, & O., 2006; Perry, 1996) (e.g., “It is each citizen’s obligation to follow political developments in the news”). The items formed a reliable measure at each wave ($\alpha_{Wave1} = .74$; $\alpha_{Wave2} = .76$; $\alpha_{Wave3} = .80$). Thus, a mean index for civic duty was computed for each wave ($M_{Wave1} = 3.64$, $SD_{Wave1} = 1.10$; $M_{Wave2} = 3.61$, $SD_{Wave2} = 1.08$; $M_{Wave3} = 3.34$, $SD_{Wave3} = 1.16$).

Information Efficacy. This concept was measured by adapting Tedesco’s (2007) scale, which includes four items and has previously been employed in young adult samples. Two items were modified to accommodate the context of this study (e.g., “I feel that I have a pretty good understanding of the important political issues facing the EU”). These items form a reliable measure at each wave ($\alpha_{Wave1} = .90$; $\alpha_{Wave2} = .89$; $\alpha_{Wave3} = .90$). A mean index for information efficacy was calculated for each wave ($M_{Wave1} = 2.53$, $SD_{Wave1} = 1.26$; $M_{Wave2} = 2.62$, $SD_{Wave2} = 1.30$; $M_{Wave3} = 2.36$, $SD_{Wave3} = 1.26$).

Covariates. A series of covariates were measured in wave 1, including sex (53.5% female), age ($M = 17.9$, $SD = .66$), educational level, and voting intention (1 = I will certainly vote, 7 = I will certainly not vote).

Integration of Content Analysis and Survey

To measure exposure to youth-relevant news content in television, newspapers, and online media, we employed linkage analysis which has been referred to as “the state-of-

the art analysis of the impact of specific news consumption on political behavior" (Fazekas & Larsen, 2016; see also Scharnow & Bachl, 2016). The approach included three main steps. First, we counted the number of youth-relevant news items (see section on content analysis) that were published in each outlet before each wave of the panel survey. This resulted in 18 scores (6 outlets x 3 waves) which indicated how intensively the news outlets reported on youth-relevant issues during the course of the election campaign. Second, these scores were used to weight the raw media exposure scores and create scores representing exposure to youth-relevant news. That is, for each individual, media exposure scores were multiplied by the number of youth-relevant news items in medium k before wave t .

$$\text{Youth relevant news exposure}_{kt} = \text{exposure to medium}_{kt} * \text{youth relevant news items in medium}_{kt}$$

For example, the exposure to RTL at wave 1 was multiplied with the number of news items on youth-relevant issues on RTL4 before wave 1. Third, to obtain an overall score of exposure to youth-relevant news *per media type*, the mean of the corresponding outlet-specific exposure scores was calculated. For instance, exposure to youth-relevant news on television before wave 1 was calculated by averaging the exposure scores for RTL4 and NOS before wave 1. Note that the exposure score for Nu.nl was treated as the indicator for exposure to youth-relevant news content in online media and weighed to re-scales the exposure measure. Because it was possible that some news outlets did not report on youth-relevant issues in one of the time periods, we added the constant 1 to each count of youth-relevant news items. This precluded any weighting by zero, which would have eliminated any inter-individual differences in media use and would thus have resulted in variables with constant values. Substantively, this approach presupposes that each news outlet includes a minimum amount of youth-relevant news and that the number of unobserved stories relevant for youth is about the same across news outlets. Because of our sampling approach, the measure of youth-relevant news is rather indicative of the differences across media outlets than of the absolute level of youth-relevant news per outlet, and this meaning of the scale is preserved when a constant is added.

Results

Our analytical approach included four steps. First, we inspected the content analytic data to learn how often Dutch news outlets covered youth-relevant issues in the period leading up to the European Parliamentary election 2014. We investigated how voting intention, civic duty, and information efficacy changed in the course of the campaign. Third, we estimated a regression model in which news exposure was used to predict political participation. Fourth, we estimated an autoregressive cross-lagged model to investigate whether the effects of media exposure were mediated by civic duty and information efficacy.

Content Analysis

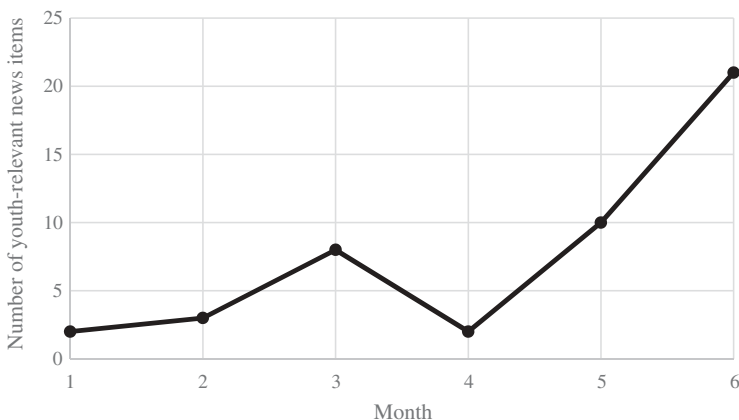
The content analysis of the news coverage in the period leading up to the European Parliamentary election 2014 revealed that there was generally very little information about youth-related topics in the EU context (see Figure 1). In the first 2 months of the election campaign, we find only 2 and 3 youth-relevant news items respectively in our sample. In the third month, the number increases to 8 items, only to fall back to 2 items in the fourth month. In the last two months of the campaign, the numbers increase to 10 and 21 youth-relevant news items, but the absolute volume is still relatively low.

This pattern in the reporting about the European Parliamentary election 2014 might explain a surprising general trend we observe in the survey data. Contrary to other election campaigns, we find that young voters became increasingly demobilized and misinformed during these 6 months. Dependent samples t-tests reveal that there is a significant decrease in vote intention ($t = 6.05, p < .001$), civic duty ($t = 7.89, p < .001$), and information efficacy ($t = 4.46, p < .001$) from wave 1 to wave 3.

Regression Analysis

To assess whether news exposure has an effect on political participation, a logistic regression analysis was conducted. Political participation was regressed on sex, age, educational level, voting intention at wave 1, in addition to the three different mean scores for exposure to youth-relevant news in television, newspapers, and online media in the election campaign computed across the three survey waves.

Figure 1
Number of Youth-Relevant News Pieces in the Course of the Election Campaign



The regression analysis was based on 733 cases which had no missing values on any of the model variables. Results are depicted in Table 1. We find that age had a negative effect on political participation ($p < .05$) and voting intention in the beginning of the election campaign had a substantial positive effect on participation ($p < .001$). While sex and educational level had no significant effect on voting, exposure to youth-relevant news on Nu.nl ($p < .01$) had a positive effect on political participation. In contrast, exposure to youth-relevant news on television and in newspapers had no significant effect on political participation. These results partially corroborate H_{1a} : Exposure to Nu.nl did indeed increase voting among first time voters. Contrary to our expectations, exposure to the television and print news had no effect on voting.

To test H_{1b} , we conducted a series of one-tailed tests that compared the size of the regression coefficient for the effect of the exposure to Nu.nl with the regression coefficients for the other news media exposure measures (Paternoster, Brame, Mazerolle, & Piquero, 1998). We find that the effect of exposure to Nu.nl was more positive than the effect of exposure to television news ($p < .05$) and the effect of exposure to print news ($p < .01$). These findings support H_{1b} , which posits that exposure to youth-relevant news content via an online news outlet has a stronger positive effect on participation than other news media outlets.

Autoregressive Cross-Lagged Model

We estimated an autoregressive cross-lagged model to investigate whether news exposure affected political participation through its effect on civic duty and information efficacy (H_{2a} & H_{2b}). This type of model currently constitutes a standard approach for the estimation of causal relationships between variables in non-experimental settings (e.g., Finkel, 1995). In the model, the three measures of exposure to youth-relevant news, civic duty, and information efficacy at wave 1 were included as predictors of the same set of variables measured in wave 2. Similarly, the measures at wave 3 were regressed on the same variables measured in wave 2. Political participation was eventually regressed on the

Table 1
Effects of Exposure to Youth-Relevant Content on Voting Behavior

Variable	<i>B</i>	<i>SE B</i>	<i>Exp(B)</i>	<i>Wald</i>	<i>p</i>
Sex	-.00	.16	1.00	.00	.991
Age	-.30	.13	.74	5.68	.017
Educational level	.06	.06	1.06	1.02	.312
Voting intention W1	.42	.05	1.52	86.03	.000
Exposure television	-.03	.05	.98	.24	.622
Exposure newspapers	-.08	.05	.93	2.21	.137
Exposure Nu.nl	.11	.04	1.12	8.99	.003

Note. Nagelkerkes $R^2 = .23$ ($N = 733$, $p < .001$)

variables measured in wave 3. Accordingly, the measures in wave 1 functioned as exogenous variables, whereas the measures in the subsequent waves functioned as endogenous variables. Errors terms of all endogenous variables measured in the same wave were correlated (Preacher & Hayes, 2008). In addition, sex, age, education, and voting intention at wave 1 were included as covariates. More precisely, these covariates were included as additional exogenous variables, which were correlated with the other measures of wave 1, and predicted each endogenous variable in the model. Lastly, second-order autoregressive effects were included in the model (i.e., autoregressive effects of a measure at wave 1 on the same measure at wave 3).

The model was estimated using Mplus 6 and weighted least square estimation (WLSMV) to account for the dichotomous dependent variable political participation (Muthén & Muthén, 2012). The model had a good fit to the data: $\chi^2(30, n = 994) = 50.719$, $p = .010$, $\chi^2/df = 1.69$, CFI = .995, RMSEA = .026. Alternative model specifications were employed to assess the robustness and validity of the findings. First, because the distributions of three exposure scores deviated from normality, we also estimated the model using maximum likelihood estimation with robust standard errors (MLR) and Monte Carlo integration (Muthén & Muthén, 2012). This model generally produced the same results with regard to the tests of the hypotheses and thus corroborated the findings from the WLSMV model (discrepancies between the two estimation techniques are addressed in the results). Second, we estimated an alternative cross-lagged model, in which the unweighted media use scores were used to represent media exposure. We expected that the exposure to youth-relevant news should have a more accentuated effect than unweighted media use. However, when comparing the pattern of results across the models, we did not find any indication that the effects were stronger in the model with exposure to youth-relevant news.

To assess the mediation of H_{2a} and H_{2b} , we first checked whether news exposure had a lagged effect on civic duty and information efficacy. When inspecting the effects of news exposure at wave 1 on civic duty and information efficacy at wave 2, we find that the exposure to youth-relevant news on Nu.nl had a significant positive effect on civic duty ($\beta = .07, p < .05$) and information efficacy ($\beta = .08, p < .01$). Exposure to television news had no consistent effects. When employing WLSMV, the results show that television news had a positive effect on civic duty ($\beta = .06, p < .05$). But this effect was only marginally significant when maximum likelihood estimation with robust standard errors (MLR) was used ($p < .10$). The effect of television news on information efficacy was only marginally significant too ($\beta = .05, p < .10$). Similarly, exposure to print news had neither a significant effect on civic duty ($\beta = .01, ns$) nor on information efficacy ($\beta = .01, ns$).

We find a similar pattern when inspecting the effects of exposure to youth-relevant news at wave 2 on civic duty and information efficacy at wave 3. Exposure to television and print news had neither a significant effect on civic duty ($\beta_v = .01, ns$; $\beta_{print} = .00, ns$) nor on information efficacy ($\beta_v = -.01, ns$; $\beta_{print} = .02, ns$). In contrast, exposure to youth-relevant news on Nu.nl had a positive effect on civic duty ($\beta = .07, p < .01$). The effect of exposure to Nu.nl on information efficacy was not significant ($\beta = .02, ns$).

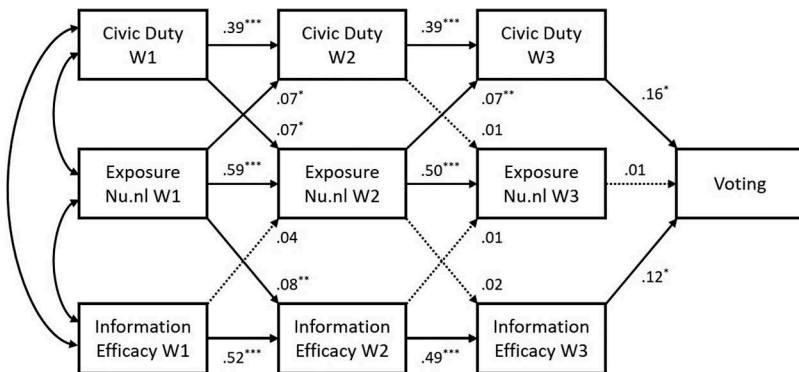
For civic duty and information efficacy to be mediators of the effects of exposure to Nu.nl, the two variables must also influence political participation.

Thus, we inspected the effects of civic duty and information efficacy at wave 3 on political participation at wave 4. The results show that both civic duty ($\beta = .16, p < .05$) and information efficacy ($\beta = .12, p = .05$) increased political participation. In addition, voting intention at wave 1 had a positive effect ($\beta = .36, p < .001$) and exposure to newspapers had a negative effect on participation ($\beta = -.13, p < .05$), respectively.

The relationships between exposure to Nu.nl, civic duty, and information efficacy are summarized in Figure 2. Overall the findings lend partial support to H_{2a} and H_{2b}. Exposure to Nu.nl seems to have an indirect effect on political participation by increasing civic duty and information efficacy. However, exposure to the non-digital news outlets did not foster civic duty or information efficacy.

In the final step, we checked whether civic duty and information efficacy affected the exposure to news outlets (i.e., media choice; Valkenburg & Peter, 2013). We find that information efficacy at wave 1 had a positive effect on exposure to newspapers at wave 2 ($\beta = .07, p < .05$). Similarly, information efficacy at wave 2 positively predicted exposure to newspapers at wave 3 ($\beta = .09, p < .05$). Civic duty at wave 1 increased exposure to Nu.nl at wave 2 ($\beta = .07, p < .05$); civic duty at wave 2 had a marginal negative effect on the exposure to television news at wave 3 ($\beta = -.06, p < .10$).

Figure 2
Effects of Exposure to Youth-Relevant News on Nu.Nl On Civic Duty, Information Efficacy, and Voting. * $P \leq .05$, ** $P \leq .01$, * $P \leq .001$**



Discussion and Conclusion

In this research, we set out to explain whether and how exposure to relevant news affects the decision of young voters in European Parliamentary elections. Considering that the overwhelming majority of citizens that had just reached voting age did not

participate in these elections, it is of high importance to understand the drivers of electoral participation to turn the tide at the next elections. We found that exposure to relevant news contributed to a higher likelihood of turnout. Yet, at the same time there was a remarkable gap of relevant news in the coverage about the EU. The absence of young voters at the voting booth could therefore partially be explained by the fact relevant news for young voters was virtually invisible in the 6 months leading up to the elections. Furthermore, seeing or reading the news in traditional news media, such as newspapers or TV news, did not have a consistent effect on youths' voting behavior.

In contrast, digital news use was found to significantly influence political participation. This relationship is mediated by two factors—the development of civic duty and information efficacy—that link exposure to news and political participation. Our analysis shows that consistent exposure to relevant news online is associated with an individual belief of partaking in the democratic processes and greater confidence in one's ability to do so. Both factors are significant drivers of participating in the elections. The fact that the mediating processes were not statistically significant for offline media is a noteworthy finding. This suggests that, in this study, use of offline news media did not have socializing effects that foster norms of citizenship. This might be attributed to higher effectiveness of online news exposure in this age group (Holt et al., 2013), but it might also be a consequence of the stronger motivation and control young users have over their consumption of online news media. As young people choose to access digital news outlets on their own devices, this self-selection process may influence the beginning of the formation of their political identity (Sears & Levy, 2003).

Considering the importance of relevant information in the news media with regard to the development of civic duty and information efficacy, it is of crucial importance to increase the accessibility of information about the EU in all news media, but most importantly online news media. There were only so many stories about the EU that featured information relevant to a young audience, that most young voters have probably not seen a single news story about the EU that was particularly relevant to them over the course of 6 months. If more stories would illustrate how European policy decision making affects the daily lives of young citizens and, more importantly, what the political alternatives with regard to these decisions are, young voters would feel more obliged to vote and capable to make a voting decision that reflects their interest.

Another important finding of this study is that young audiences approach news differently. The habitual use of a daily newspaper during breakfast has been complemented and perhaps even replaced by digital media that inform in a timely manner and allow users to engage in the stories that seem relevant while merely scanning all other events. This finding is in line with Sundar and Limperos (2013) argument that not only the content of media but also the technological mode of exposure gratifies needs. Consequently, the mode of presentation is crucial for the satisfaction of media related needs and the motivation to process information.

In this study we used an elaborate data set that combined content analysis data with panel survey data to build a strong causal argument (see also Schuck, Vliegenthart, & De Vreese, 2016). This combination of multiple wave panel data and media content data at the individual level is generally seen as the state of

the art of observational media effects research. Despite these qualities, such a design tends, if anything, to *underestimate* actual media effects (Scharkow & Bachl, 2016). Moreover, obviously even such a combination of data does not provide for a clear-cut demonstration of causality, as an exogenous source of variation would to establish causality definitively (Angrist & Pischke, 2014; Morgan & Winship, 2014; Murnane & Willett, 2010; Pearl, 2009). There could be factors we have not measured that influenced the relationship of news use and turnout. Future research might be well advised to investigate the impact of news consumption in social media in a peer network as a factor. This however was beyond the scope of the current study.

Furthermore, it should be noted that the results of the cross-lagged models remained stable when raw media use scores were used instead of weighted media exposure scores. This conflicts with our expectation that media effects are stronger when actual exposure to media content is considered. The finding raises the question of whether the exposure to youth-relevant news, the exposure to other aspects of news reporting, or simply media use is the crucial determinant of civic duty, information efficacy, and voting. This question cannot be conclusively answered in the present study. But future research could employ differential weighting criteria and compare how they influence the strength of the associations between media exposure and political engagement. For instance, it is conceivable that additional aspects of news, such as thematic versus episodic framing, negativity, or emotionality, are related to young people's political engagement, and these content categories could thus be employed for weighting.

Another shortcoming of our research is that we were not able to observe all factors that were important to explain political participation among young voters. When looking at the development of voting intention over time it becomes clear that there was a massive decrease over the course of 6 months. Yet most of the effects of exposure to news we are able to discern are positive. As we are only able to identify that exposure to tabloid media contributed to the decrease in voting intentions to a small extent, our models are under-specified, even though the model fit is very good. Therefore, future research should study this development in depth: What shook the confidence of young voters to such a high extent that the campaign had a demobilizing effect on them? If it was not information they gained from news media or through conversations, what changed their mind about participating in the elections?

On a final note, we observe that due to the schedule of the electoral year, the 2014 European Parliamentary election was preceded by local elections a few months earlier. This means that for a majority of the sample the European elections were not actually the first elections they participated in, but the second. Hence, in future research it would be worthwhile to investigate news effects on first elections and compare between first order and second order elections (Franklin, 2004).

All in all, the European Union cannot rely on news media to cultivate young Europeans into European citizenship and a feeling of duty towards Europe. Instead, it needs to ensure that information about the European Union is available to young citizens in a form that is understandable and relevant to them. This kind of information can build their self-confidence as European citizens which can lead to participation.

References

- Angrist, J. D., & Pischke, J. S. (2014). *Mastering 'metrics: The path from cause to effect*. Princeton, NJ: Princeton University Press.
- Belli, R. F., Traugott, M. W., Young, M., & McGonagle, K. A. (1999). Reducing vote over-reporting in surveys: Social desirability, memory failure, and source monitoring. *Public Opinion Quarterly*, 63(1), 90. doi:10.1086/297704
- Blais, A., & Rubenson, D. (2013). The source of turnout decline: New values or new contexts? *Comparative Political Studies*, 46(1),95–117. 10.1177/0010414012453032
- Boyd, M. J., Zaff, J. F., Phelps, E., Weiner, M. B., & Lerner, R. M. (2011). The relationship between adolescents' news media use and civic engagement: The indirect effect of interpersonal communication with parents. *Journal of Adolescence*, 34(6),1167–1179 10.1016/j.adolescence.2011.07.004
- Chaffee, S. H., & Kanihan, S. F. (1997). Learning about politics from the mass media. *Political Communication*, 14(4), 421–430. 10.1080/105846097199218
- Chareka, O., Sears, A., & Chakera O. (2006). Civic duty: Young people's conceptions of voting as a means of political participation. *Canadian Journal of Education/Revue Canadienne De L'éducation*, 29 (2),521. doi:10.2307/20054175
- Dalton, R. J. (1996). *Citizen politics in western democracies*. Chatham, NJ: Chatham House.
- Delli Carpini, M. X. (2000). Gen.com: Youth, civic engagement, and the new information environment. *Political Communication*, 17(4), 341–349.
- Directorate-General for Communication Public Opinion Monitoring Unit. (2014). Eurobarometer post-election survey 2014. Retrieved from http://www.europarl.europa.eu/pdf/eurobarometre/2014/post/post_ee2014_sociodemographic_annex_en.pdf
- Elenbaas, M., De Vreese, C., Schuck, A., & Boomgaarden, H. (2014). Reconciling passive and motivated learning: The saturation-conditional impact of media coverage and motivation on political information. *Communication Research*, 41, 481–504. doi:10.1177/0093650212467032
- Fazekas, Z., & Larsen, E. G. (2016). Media content and political behavior in observational research: A critical assessment. *British Journal of Political Science*, 46(01), 195–204. doi:10.1017/S000712341500006X
- Finkel, S. E. (1995). *Causal analysis with panel data*. Thousand Oaks, CA: Sage.
- Franklin, M. N. (2004). *Voter turnout and the dynamics of electoral competition in established democracies since 1945*. Cambridge, UK: Cambridge University Press.
- Gleissner, M., & De Vreese, C H. (2005). News about the EU constitution: Journalistic challenges and media portrayal of the European union constitution. *Journalism*, 6(2), 221–242. doi:10.1177/1464884905051010
- Holt, K., Shehata, A., Strömbäck, J., & Ljungberg, E. (2013). Age and the effects of news media attention and social media use on political interest and participation: Do social media function as leveller? *European Journal of Communication*, 28(1),19–34. 10.1177/0267323112465369
- Kaid, L. L., McKinney, M. S., & Tedesco, J. C. (2007). Introduction: Political information efficacy and young voters. *American Behavioral Scientist*, 50(9),1093–1111. doi: 10.1177/0002764207300040
- Kruikemeier, S., Van Noort, G., Vliegenthart, R., & De Vreese, C. H. (2014). Unraveling the effects of active and passive forms of political Internet use: Does it affect citizens' political involvement? *New Media & Society*, 16(6),903–920. 10.1177/1461444813495163
- Lee, N.-J., Shah, D. V., & McLeod, J. M. (2012). Processes of political socialization: A communication mediation approach to youth civic engagement. *Communication Research*. doi:10.1177/0093650212436712
- McCombs, M., & Poindexter, P. (1983). The duty to keep informed: News exposure and civic obligation. *Journal of Communication*, 33(2),88–96. 10.1111/j.1460-2466.1983.tb02391.x
- Michailidou, A. (2015). The role of the public in shaping EU contestation: Euroscepticism and online news media. *International Political Science Review*, 36(3), 324–336. doi:10.1177/0192512115577230

- Mindich, D. T. (2005). *Tuned out: Why Americans under 40 don't follow the news*. Oxford, UK: Oxford University Press.
- Moeller, J., De Vreese, C., Esser, F., & Kunz, R. (2014). Pathway to political participation: The influence of online and offline news media on internal efficacy and turnout of first-time voters. *American Behavioral Scientist*, 58(5), 689–700. [10.1177/0002764213515220](https://doi.org/10.1177/0002764213515220)
- Morgan, S. L., & Winship, C. (2014). *Counterfactuals and causal inference*. Cambridge, UK: Cambridge University Press.
- Mossberger, K., Tolbert, C. J., & McNeal, R. S. (2008). Digital citizenship. In *The internet, society, and participation* (pp. 1). Cambridge, MA: MIT Press.
- Murnane, R. J., & Willett, J. B. (2010). *Methods matter: Improving causal inference in educational and social science research*. Oxford, UK: Oxford University Press.
- Muthén, L. K., & Muthén, B. (2012). *Mplus user's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Niemi, R. G., Craig, S. C., & Mattei, F. (1991). Measuring internal political efficacy in the 1988 National Election Study. *American Political Science Review*, 85(4), 1407–1413.
- Norris, P. (2003). *A virtuous circle: Reinventing political activism*. Cambridge, UK: Cambridge University Press.
- Paternoster, R., Brame, R., Mazerolle, P., & Piquero, A. (1998). Using the correct statistical test for the equality of regression coefficients. *Criminology*, 36(4), 859–866. [10.1111/crim.1998.36.issue-4](https://doi.org/10.1111/crim.1998.36.issue-4)
- Pearl, J. (2009). *Causality*. Cambridge, UK: Cambridge University Press.
- Perry, J. L. (1996). Measuring public service motivation: An assessment of construct reliability and validity. *Journal of Public Administration Research and Theory*, 6(1), 5–22. doi:[10.1093/oxfordjournals.jpart.a024303](https://doi.org/10.1093/oxfordjournals.jpart.a024303)
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. doi:[10.3758/BRM.40.3.879](https://doi.org/10.3758/BRM.40.3.879)
- Scharkow, M., & Bachl, M. (2016). *Messages mis-measured: Minimal media effects as a consequence of unreliable measurement*. Paper presented to ICA, Fukuoka, Japan, June.
- Schuck, A. R. T., Vliegenthart, R., & De Vreese, C. H. (2016). Matching theory and data: Why combining media content with survey data matters. *British Journal of Political Science*, 46(1), 205–213. doi:[10.1017/S0007123415000228](https://doi.org/10.1017/S0007123415000228)
- Sears, D. O., & Levy, S. (2003). Childhood and adult political development. In D. O. Sears, L. Huddy, & R. Jervis (Eds.), *Oxford handbook of political psychology* (pp. 60–109). Oxford, UK: Oxford University Press.
- Shah, D. V., McLeod, J. M., & Lee, N. J. (2009). Communication competence as a foundation for civic competence: Processes of socialization into citizenship. *Political Communication*, 26(1), 102–117. doi: [10.1080/10584600802710384](https://doi.org/10.1080/10584600802710384)
- Sotirovic, M., & McLeod, J. M. (2004). Knowledge as understanding: The information processing approach to political learning. In L. L. Kaid (Ed.), *Political communication research* (pp. 357–395). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Strömbäck, J., Negrine, R., Hopmann, D. N., Jalali, C., Berganza, R., Seeber, G. U. H., ... M., Maier, M. (2013). Sourcing the news: Comparing source use and media framing of the 2009 European parliamentary elections. *Journal of Political Marketing*, 12(1), 29–52. doi:[10.1080/15377857.2013.752227](https://doi.org/10.1080/15377857.2013.752227)
- Sundar, S. S., & Limperos, A. M. (2013). Uses and grats 2.0: New gratifications for new media. *Journal of Broadcasting & Electronic Media*, 57(4), 504–525. doi:[10.1080/08838151.2013.845827](https://doi.org/10.1080/08838151.2013.845827)
- Tedesco, J. C. (2007). Examining Internet interactivity effects on young adult political information efficacy. *American Behavioral Scientist*, 50(9), 1183–1194. doi:[10.1177/0002764207300041](https://doi.org/10.1177/0002764207300041)
- Valkenburg, P. M., & Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication*, 63(2), 221–243.
- Van Spanje, J., & De Vreese, C. (2014). Europhile media and eurosceptic voting: Effects of news media coverage on Eurosceptic voting in the 2009 European Parliamentary elections. *Political Communication*, 31(2), 325–354. doi:[10.1080/10584609.2013.828137](https://doi.org/10.1080/10584609.2013.828137)