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# Still going strong? The role of traditional media in the 2021 Dutch parliamentary elections

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## Abstract

Previous research has demonstrated that both visibility of parties, party leaders, candidates, and topics, and the sentiment of this coverage can affect people's decision in the ballot box. Most of this research was, however, done in the period before social media gained importance which has drastically changed the media consumption of citizens. The main aim of this paper is to investigate whether, and if so to what extent, traditional media use during the 2021 Dutch parliamentary elections has (still) affected vote choice in this era of social media. To study this, two-wave panel survey data from the Dutch Parliamentary Election Survey (DPES) are combined with an automated content analysis of newspaper articles ( $N=35,511$ ). We created respondent-specific content variables to conduct a linkage analysis. Our analysis, relying on a pooled analysis of respondent-party combinations ( $N=54,162$ ), demonstrates that political parties profit electorally from being visible in both newspapers and online outlets. This is in particular true for parties that are not part of parliament yet, thus increasing the further fragmentation and division in Dutch politics. Contrary to the expectations, sentiment in online media has a negative effect, with negative coverage increasing electoral support.

**Keywords** News media · Dutch parliamentary elections · Automated content analysis · Linkage analysis

Previous research has demonstrated that both visibility of parties, candidates, and topics, and the sentiment in news coverage can affect people's decision in the ballot box (Hopmann et al. 2010; Kleinnijenhuis et al. 2007). However, most of these

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studies were conducted before social media became an integral part of news use. In this paper, we investigate whether, and if so, to what extent, traditional media use during the 2021 Dutch parliamentary elections affected vote choice, while controlling for a range of other variables including social media expenditures. Our specific interest focuses on the contingency of media effects and understanding how different political parties are affected differently. More specifically, we investigate whether media effects depend on whether parties are participating in the general elections for the first time. We combine two-wave panel survey data from the Dutch Parliamentary Election Survey (DPES; Jacobs et al. 2021) with an automated content analysis of news sources. In the DPES, questions about the frequency of use of specific media are asked. We collect the content of those media and use existing content analytical tools to analyze the visibility and tone of the political coverage. We do this in the ODISSEI Media Content Analysis Lab environment.

Based on those analyses and the media use questions from the DPES, we create respondent-specific content variables (i.e., linkage analysis; de Vreese et al. 2017). Those can be used to assess whether the visibility and tone are associated with changes in voting preferences between the pre-election and post-election wave of the DPES, while controlling for a range of other variables. Our analysis demonstrates how traditional media are still an important player in current election campaigns and which content has been most influential in changing people's minds throughout the campaign. More specifically, the results reveal that attention for political parties has a small positive effect on vote choice. This effect is larger for newer parties, thus indirectly contributing to a further fragmentation of the Dutch political landscape. Surprisingly, the results indicate that newspaper sentiment has a positive impact on electoral support, while online sentiment has a negative impact, in such a way that negative coverage of a party increases the vote choice for that party.

## Theory

In the past ten years, the use of traditional news sources such as radio, television, and printed newspapers in The Netherlands has declined. Social media platforms have become increasingly popular as sources of political information and since the rise of social media, media use has changed as citizens no longer need to solely rely on traditional news outlets. Interestingly, this declining trend in traditional media use has discontinued since the start of the COVID-19 crisis. Citizens started to again rely more on television news and online newspapers gained ground at the expense of social media use. During the crisis, more than four out of five Dutch citizens indicated that they use traditional media as their main news source (see e.g., Meijer 2021; Newman et al. 2021). Although patterns of news consumption have changed since the rise of social media, empirical studies do not find clear monolithic effects of social media on, for example, vote choice. This leads us to wonder if traditional news sources (or their online versions) still play a role and if so, how big this role exactly is.

Before social media offered an alternative route to political information, traditional news media (e.g., newspapers and television news) were the main sources of



political information for citizens. Due to a lack of face-to-face encounters with politicians, citizens based the ideas they had about parties and in extension about individual politicians on who and what they saw in the media. It is therefore not surprising that researchers extensively studied how media coverage of parties, politicians, and issues influences vote choice. The existing literature focuses mainly on which politicians, parties, or topics are featured and thus how mere visibility, or being in the media, impacts vote choice.

Apart from visibility, the used sentiment frame or tone (mostly positive, neutral, or negative) and thus *how* media cover political parties, political issues, or politicians is studied. In these studies, researchers examine whether positive reporting generates more support and/or whether negative reporting generates less support. The main purpose of this study is to test whether findings regarding visibility and sentiment still hold during elections (the 2021 Dutch parliamentary elections) in the social media era. Additionally, we explore in what ways the effects differ across established and new parties.

## Visibility

Theories such as agenda setting and priming all assume an effect of media coverage on people's opinions about political themes and actors (Scheufele and Tewksbury 2007), and thus media coverage can also indirectly influence voters' vote choice. Priming theories state that when citizens receive and process information, the information leaves a footprint in their memory. When information is often repeated, the content of the message is primed and made more accessible in an individual's memory (Tulving and Watkins 1975). When citizens have to form an idea about political parties, or politicians, the primed information is more easily available and retrievable from memory (Iyengar 1990). When we translate this to election campaigns, politicians, or parties that appear more in the news will be more top of mind for voters. When citizens then stand in the voting booth with a long list of names of parties and politicians in front of them, it can be expected that their vote will go to a name that looks familiar. Agenda setting theories hypothesize that the media agenda drives the public agenda and that media thus determine which political parties or politicians are considered as important or relevant by voters. Weaver (1996) even speaks of a 'candidate agenda' that establishes an order among individual politicians according to the amount of media attention they receive and thus a direct positive impact on their electoral fortunes.

Regardless of which mechanisms are at play, research into the effect of visibility overall confirms that media visibility impacts the vote choice of citizens. Semetko and Schoenbach (1994) proved that even a slight change in the visibility of political actors could explain changes in party evaluations. Hopmann et al. (2010) found that the visibility of a political party increases the number of citizens that would vote for this party. A more recent study, conducted by Geiß and Schäfer (2017), also found that visibility of the two major German parties and their candidates was a good predictor for the vote intention of citizens in an election campaign, and that a higher visibility successfully increased their electoral success.



Very similar results are found in a study by Oegema and Kleinnijenhuis (2000) on the Dutch national elections of 1998, where greater media visibility of party leaders increased the likelihood of people voting for that politician or their party. Van Aelst et al. (2008) studied different media outlets and found that appearances on television news have a substantial impact on political success. Newspapers in particular proved to have a significant effect on the less well-known candidates who never appear on television (Maddens et al. 2006). Moreover, more recent work that looked at the effect of party leaders appearing in the news found that media visibility of these politicians is likely to affect voters' vote decision. Bos (2012) demonstrated that media visibility is important for political success for all party leaders, irrespective of their political orientation. Aaldering et al. (2018) found that media visibility of political leaders positively influences the intention of citizens to vote for that party leader.

Based on previous work, and our assumption that traditional news outlets still matter, we formulate our first hypothesis: (H1) The higher the media exposure of an individual to a certain party, the higher the probability that this individual will vote for that party.

Previous research has demonstrated that visibility effects are not equal across all parties. Established parties generally receive more media coverage than new or small parties. Bennett (1990) stated in his indexing theory that media tend to give more attention to powerful actors and new or small parties are often not (yet) relevant. This while in particular less known parties profit from media visibility. Lucardie (2000) stated that mass media can "nip a new party in the bud by ignoring or ridiculing it when it tries to enter the political arena" (p. 180). New parties often have low levels of support which gives journalists less incentive to give them media attention. In some cases, this limitation can be compensated by making controversial statements in which they challenge the existing norms and values. This way new parties can spark debate and receive relative high levels of media attention compared to their size. Vliegthart and Van Aelst (2010) argue that new parties in particular need the media visibility as a source of legitimacy. In a longitudinal study on the interaction between visibility and standing in the polls for a range of Dutch political parties, they indeed demonstrate that the impact of visibility on standing in the polls is stronger for smaller parties. Most studies that acknowledge the importance of visibility for new parties focus on the right side of the political spectrum (Birenbaum and Villa 2003; Burscher et al. 2015; Ellinas 2010; Mazzoleni 2003; Schafraad et al. 2012; Van Spanje and Azrout 2019; Vliegthart et al. 2012). Populist parties generally claim to speak for the wider public which makes reaching the wider public through the media crucial. Rydgren (2005) found that media attention strongly contributes to their success.

Vliegthart et al. (2012) studied six anti-immigration parties in different European countries and found compelling evidence of the positive influence of news coverage on vote choice of citizens. An important side note here is that not all new or small extreme right parties benefited equally from media attention. Some parties were considered too marginal and faced the disadvantage of not being taken seriously (Bos and Van der Brug 2010). They concluded that consistently excluding



anti-immigrant parties from the media might be an effective strategy to reduce their political success.

Translated to the context of this study, we anticipate that new parties that were not represented in parliament after the previous elections are more strongly affected by visibility than parties that are already represented in parliament. Thus, our second hypothesis reads as follows: (H2) The effect of visibility on vote probability (H1) is larger for parties that are not represented in parliament than for those that are represented in parliament.

## Sentiment

In addition to visibility, the sentiment framing of news coverage is expected to impact how citizens form an idea about political parties or individual politicians. If a political party is systematically framed in a negative way, it can be expected to influence the idea citizens have about this party, and in addition the amount of votes that party receives. Early research in social psychology showed that negative trait-descriptions are more influential than comparable positive trait-descriptions (Anderson 1965; Hamilton and Zanna 1972; Koenigs 1974) and that negative first impressions are more resistant to change than positive first impressions (Beigel 1973; Richey et al. 1967). Negative information thus seems to carry more importance than positive information in the formation of opinions and in addition the consequences of negative evaluations are bigger than the consequences of positive evaluations (Lau 1982).

This negativity bias is, however, not always confirmed in previous research. Norris, Curtice, Sanders, Scammell, and Semetko (1999) conducted an experiment and discovered that a positive tone toward certain political actors prompts citizens to feel more positive toward those actors. Interestingly, negative news content was found to be unimportant. Zaller (1992) found that the sentiment of a news message can, under certain circumstances, affect how citizens feel about political actors and their voting behavior. Similar results were reported in a study by Kleinnijenhuis et al. (2007) who proved that news coverage of either success or failure of political actors had a big influence on the evaluation of those political actors by citizens. Moreover, a long-term German study covering both election and routine periods found that the sentiment of evaluations in the media influenced the public contentment or discontentment with party leaders (Brettschneider 2002). Aaldering et al. (2018) discovered that positive coverage of political leaders increases support for the leader's party, while negative news coverage decreases this support. Based on those findings, we formulate the following hypothesis: (H3) The more positive the coverage of a certain party that someone is exposed to, the higher the probability that this person will vote for that party.

Finally, attention and sentiment might reinforce each other, in such a way that political parties in particular profit from attention when the coverage is positive. While this seems intuitively a plausible argument, previous research did not find such an interaction effect to be present (Hopmann et al. 2010). A possible explanation could be that negative news is often seen as more newsworthy and considered by citizens as more



relevant, which may cause voters to remember this information longer. This might in its turn benefit the priming effect. Based on this it could be expected that voters are more likely to remember negative news coverage (Hourihan et al. 2017). This might be especially true for newer or smaller parties. The idea that citizens have about these parties is often not yet fully formed and is therefore more susceptible to new information. We therefore pose the following research question: (R1) Do visibility and sentiment reinforce each other, in such a way that the effects of visibility on vote choice (H1) increase when the sentiment becomes more positive?

## Dutch parliamentary elections

In the current study, we focus on the context of the Dutch parliamentary elections. The 2021 Dutch parliamentary elections were held from March 15 to 17, 2021. The election had originally been scheduled to take place on 17 March; however, due to the coronavirus, additional measures were put in place to ensure a safe voting process. These measures included early voting on Monday 15 March and Tuesday 16 March, in particular for voters considered vulnerable to the coronavirus. Furthermore, voters aged 70 or older had the option to vote by mail.

In the Netherlands, parliamentary elections are held once every 4 years, or earlier when majority support for the government in Parliament disappears. The government is composed of multiple parties (usually two, three, or four parties). Between 2017 and 2021, the government consisted of four parties (i.e., VVD, D66, CDA, and ChristenUnie). During the Dutch parliamentary elections, members of the Lower House (*de Tweede Kamer*) are elected directly by the population using a system of proportional representation and an open list system. All Dutch nationals aged 18 or over may cast their vote for candidates who belong to a specific political party. Over the past decades, on average around ten parties were represented in Parliament. In recent years, a whole range of new parties appeared in the Dutch political system. Following the 2021 parliamentary elections, seventeen parties have been elected. The number of parties elected had not been this high since 1918.

The Dutch media system is identified as belonging to the Democratic-Corporatist model, which can be characterized by high levels of state intervention to protect press freedom, a strong public broadcast system, and high levels of journalistic professionalization (Hallin and Mancini 2004). Although news consumption patterns of Dutch citizens have changed since the rise of social media, traditional news media still seem to play an important role. In the Netherlands, newspaper readership is relatively high. For instance, in 2020, approximately three million Dutch citizens aged 13 and older read a printed national newspaper every day (Multimedia Nationaal Onderzoek 2021).



## Method

To test the effects of media visibility and sentiment on vote choices, we combine two different datasets: (1) two-wave panel survey data from the Dutch Parliamentary Election Survey (DPES; Jacobs et al. 2021) and (2) an automated content analysis of news sources.

### Two-wave panel survey data

First, we rely on data of the DPES 2021 (Jacobs et al. 2021). The DPES is carried out under the auspices of the Foundation for Electoral Research in the Netherlands (Stichting Kiezersonderzoek Nederland, SKON) in collaboration with the Dutch Institute for Social Research (SCP) and Statistics Netherlands (CBS). These surveys have been conducted since 1970. In the current study, we rely on the data from the DPES that was conducted in the run-up to the 2021 Dutch parliamentary elections and in the weeks after the elections. The study consists of two waves: (1) a pre-election survey between January 26 and March 14 and (2) a post-election survey between March 18 and May 17.

The fieldwork was carried out by I&O Research and CentERdata. Respondents who were 18 years of age or older on the election date March 17, 2021, have a Dutch nationality, are registered in the Personal Records Database (BRP), reside in the Netherlands and do not belong to an institutional household, were invited to participate in an online questionnaire (after one week, the respondents who had not yet participated received a reminder together with the paper questionnaire—to invite respondents who did not have internet access or lack digital skills). In total, 4,839 respondents participated of which 3,186 completed the second wave and are included in the analyses presented here. A detailed research description and codebook are provided by Sipma, Jacobs, Lubbers, Spierings, and Van der Meer (2021).

We used the following set of variables:

**Newspaper attention** Respondents were asked: “Which of the following newspapers do you read daily or almost daily? Foreign or regional newspapers are also possible. More than one answer is possible.” The following options are listed: ‘*Telegraaf*,’ ‘*Volkskrant*,’ ‘*Trouw*,’ ‘*NRC Handelsblad*,’ ‘*NRC Next*,’ ‘*Algemeen Dagblad*,’ ‘*Financieel Dagblad*,’ ‘a Regional newspaper,’ and ‘Other.’

**Online attention** Respondents were asked: “Below, there are some well-known news sources on the Internet. Can you indicate how often you get *news about politics and political parties* from each source?” Eleven different outlets are listed (e.g., [www.nos.nl](http://www.nos.nl), [www.nu.nl](http://www.nu.nl)). Answer categories include ‘Never,’ ‘Less than once a week,’ ‘1–2 times a week,’ ‘3–4 times a week’ and ‘(Almost) daily.’

**Vote intention** In the first wave, respondents were asked: “Are you going to vote for the Dutch parliamentary elections on March 17?”. Next, they were asked: “Which party will you vote for?”. They could choose from any of 17 listed parties, write down another one, or use the don’t know option. They could also indicate they did not intend to vote.





**Vote choice** In the post-election these questions were asked retrospectively: “Did you vote in the parliamentary elections on March 17?” and “Which party did you vote for?”.

Besides, we included a set of additional control variables—that could have an impact on our dependent variable. We include *gender* (51.5% female) and *age* ( $M=51.0$ ,  $SD=18.4$ ) as controls in the analysis. Furthermore, we included *political interest* (3-point scale, running from ‘not’ (0) to ‘very’ (2),  $M=0.95$ ,  $SD=0.60$ ) and *satisfaction with democracy* (4-point scale, running from ‘not at all satisfied’ (0) to ‘very satisfied’ (3),  $M=2.65$ ,  $SD=1.13$ ). Finally, *education* (8-point scale, running from ‘elementary school’ (1) to ‘university master’ (8),  $M=4.90$ ,  $SD=1.84$ ) was included. We do not expect them to exert a strong influence on the general likelihood to vote for a party, which is equal for every respondent that did not abstain or voted for a party that is not in our dataset.

Additionally, we control for *spending on social media advertising* on the party level. Arguably, targeting through social media has become, next to traditional media coverage, an important element of current election campaigns that is argued to affect voting preferences as well. We rely on data from the Dutch website [www.politieke-advertenties.nl](http://www.politieke-advertenties.nl) and summed and log-transformed the total amount of euros spent on online ads on Facebook (including Instagram) and Google (including YouTube) in the period between February 1 and March 17. Finally, to test our hypotheses related to differences across parties, we created a dummy variable: *new party*, that has a score of 1 for parties that were not (yet) part of parliament (JA21, Volt, BBB, and BIJ1) and 0 for all other parties.

## Automated content analysis

**Sample** The second dataset is based on a data collection effort in the context of ODISSEI’s Media Content Analysis Lab. An automated content analysis has been carried out on news articles from six Dutch newspapers and two online news outlets. We used the Amsterdam Content Analysis Toolkit (AmCAT) to collect all news articles (i.e., not a sample) in the period from January 26, 2021, through March 17, 2021. This resulted in a sample of 35,511 news articles.

**Newspapers** We collected news articles from five of the daily newspapers with the highest circulation in the Netherlands and the only Dutch financial newspaper (Multimedia Nationaal Onderzoek 2021). We analyzed two popular newspapers (*Algemeen Dagblad*;  $n=3718$  and *Telegraaf*;  $n=7239$ ), three quality newspapers (*Volkscrant*;  $n=3479$ , *NRC Handelsblad*;  $n=4013$ , and *Trouw*;  $n=3405$ ), and one financial newspaper (*Financieel Dagblad*;  $n=3184$ ).

Speaking to a broad audience, popular newspapers have shorter stories, large illustrations, and big headlines, which are obvious tabloid characteristics (Skovsgaard 2014). According to Boukes and Vliegthart (2020) the popular newspapers in our study identify themselves as being a ‘family newspaper’ (*Algemeen Dagblad*) for who ‘consumer demand is key’ (*Telegraaf*). In contrast, the three quality newspapers, do not refer to wide appeal but explicitly refer to ‘quality’ and discuss



‘backgrounds, opinion, and debate’ (*Volkskrant*) and ‘in-depth reporting’ (*NRC Handelsblad* and *Trouw*) in their outlet description (Boukes and Vliegthart 2020).

**News websites** In addition, we collected online news items from two widely used online-only news outlets: *NU.nl* ( $n=6976$ ), a Dutch online newspaper, and *NOS.nl*, the Dutch public broadcaster, which offers news items ( $n=2302$ ) as well as updates through a liveblog ( $n=1195$ ).

**Visibility of political parties** First, we aim to examine the visibility of political parties. As shown in Table A1, 37 parties and 1,579 candidates participated in the 2021 Dutch parliamentary elections (Kiesraad 2021). We examined the visibility for *all* parties by counting their appearances in newspaper articles throughout the period from January 26, 2021, through March 17, 2021.

The visibility of the four *largest* parties (VVD, PVV, CDA, and D66) and the four *new* parties (BIJ1, JA21, Volt, and BBB) is presented in Fig. 1. The visualization of the visibility of party leaders and party candidates can be found in the appendix.

**Sentiment of political parties** For the sentiment analysis, we used a dictionary-based method developed by de Vries (2022) (see Appendix D, Table D for the seed dictionary. The full dictionary can be found in the supplementary material). The method was developed by first manually coding a set of sentences as positive, neutral, or negative. An intensive training was held prior to the actual coding and after reaching an acceptable reliability (Krippendorff’s  $\alpha=0.84$ ), a set of 2,000 sentences was manually coded. In the next step, a sentiment dictionary was built using a word embedding model and a seed dictionary (developed by Rheault et al. 2016). The final sentiment dictionary is constructed by comparing the words of the corpus with the seed words based on their co-occurrence with other words. The summed cosine similarity of a corpus word with all seed words indicates its relative proximity to the group of positive/negative seed words. The words with the highest scores, positive or negative, are included in the final dictionary. As such, the sentiment dictionary is specific to the context of the corpus. Finally, this dictionary is

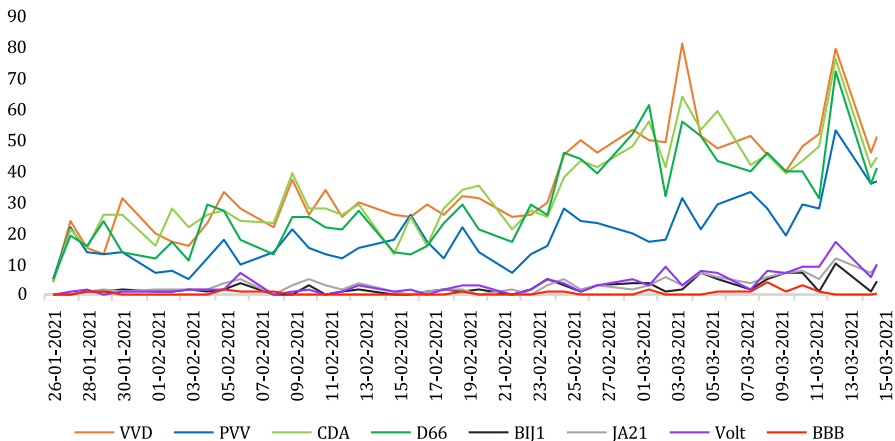


Fig. 1 Visibility of political parties during the 2021 election period (number of article appearances)



further optimized by leveraging information from the manually coded sentences. We included a negative and positive example in Appendix D, Table D2.

Sentence-level sentiment is then calculated by adding the scores of the words in the sentence that are included in the sentiment dictionary and dividing it by the total number of words in the sentence. Then, each sentence is classified as either negative, neutral, or positive by applying a negativity and positivity threshold to the sentiment scores. Finally, actor-level sentiment is computed per party occurring in an article, which entails the weighted average sentiment of all sentences in the article. More specifically, the discretized sentence score (-1 for negative, 0 for neutral and 1 for positive) is multiplied with the number of words in the sentence. Scores for each sentence are added and divided by the total number of words in the article, yielding the final sentiment score.

For this paper, the average sentiment for every party is calculated by computing the mean actor sentiment of all articles for the whole election period. The performance of the automated sentiment analysis system was evaluated on the manually coded training set, using fivefold cross-validation, and reached acceptable levels. Hereto, sentiment scores were discretized into ordinal (-1 for negative, 0 for neutral, and 1 for positive) scores. The balanced accuracy is 0.64, precision is 0.63, recall is 0.65, and F1 is 0.64. These scores are satisfactory in comparison with other studies that rely on automated sentiment coding (Boukes et al. 2020), but results still need to be treated with caution. The overall sentiment used in articles that feature parties is slightly negative (under 0) and in particular, new parties (for example, BBB and JA21) receive relative positive treatment, probably due to the more limited number of articles on which the calculations are based.

Table 1 presents an overview of our variables that we take into account to examine the role of traditional media in the 2021 Dutch parliamentary elections. The visibility of political parties is a percentage of the number of appearances in newspaper articles throughout the period from January 26, 2021, through March 17, 2021, set against the total number of news articles (see Appendix B and Appendix C for more details). The sentiment score is aggregated for all news outlets and the difference in these aggregated scores are minimal. Remarkably, all aggregated sentiment scores are positive. As shown in Table 1, seats were allocated to 17 different parties.

## Integration and analysis

Based on these data, we constructed for each respondent/party combination two times two personalized media exposure variables. The first one combines the newspaper data with newspaper attention. For each respondent/party combination, the score is the sum of the visibility across all newspapers the respondent indicated to use. The second one combines the newspaper data with online attention. Here, the variable was a weighted sum of the use visibility scores on the two websites. Per website, media visibility was multiplied by user frequency, with ‘Less than once a week’ receiving a score of 1 up to ‘(Almost) daily’ a score of 4. This measure was then divided by maximum frequency (4 per outlet) and summed over the two outlets. We repeated exactly the same procedure for sentiment, using the average sentiment



**Table 1** Descriptives visibility, sentiment, vote choice, and election results for the seventeen elected parties

Political party	Visibility	Sentiment	Vote choice DPES	Election results NL	
	%		%	%	Seats
1. VVD	4.45	0.0051	13.59	21.87	34
2. PVV	2.45	0.0036	4.66	10.79	17
3. CDA	4.20	0.0048	6.20	9.50	15
4. D66	3.74	0.0051	11.32	15.02	24
5. GroenLinks	2.75	0.0056	4.06	5.16	8
6. SP	2.45	0.0049	4.31	5.98	9
7. Partij van de Arbeid	3.11	0.0053	4.85	5.73	9
8. ChristenUnie	1.89	0.0041	2.64	3.37	5
9. Partij voor de Dieren	1.15	0.0055	2.89	3.84	6
10. 50PLUS	0.68	0.0052	0.83	1.02	1
11. SGP	1.09	0.0048	1.15	2.07	3
12. DENK	2.44	0.0066	0.35	2.03	3
13. Forum voor Democratie	1.86	0.0036	1.83	5.02	8
14. BIJ1	0.31	0.0078	0.38	0.84	1
15. JA21	0.43	0.0060	1.81	2.37	3
16. Volt	0.46	0.0074	2.08	2.42	3
17. BBB	0.06	0.0091	0.33	1.00	1

scores per outlet. While this type of linkage analysis is considered state-of-the-art practice when it comes to investigating media effects in a real-life setting (de Vreese et al. 2017), the individualized scores provide an approximation of consumed media content, as based on self-reports, we cannot be sure whether the respondent actually read or saw the content.

Our dataset has a pooled structure, with respondent–party combinations as the unit of analysis. The number of cases is 54,162 (3186 respondents  $\times$  17 parties). The dependent variable is vote choice. The main independent variables are newspaper attention and online attention. Our dependent variable is dichotomous—i.e., a respondent indicates having voted for a party, or not. Therefore, we rely on logistic regression models. To account for the lack of independence of observations (i.e., respondents are in the dataset multiple times, as are parties), we cluster the standard errors on an individual level.

Alternative specifications (i.e., multilevel models with parties nested in individuals) yield comparable findings (see Table E1).



## Results

Table 2 provides a test of our expectations. Both newspaper and online attention for political parties increases their electoral support. Effects are, as one can anticipate, relatively small, with minor changes in the odd ratio's caused by the media variables. The first model focuses on the effects of attention. It confirms our first hypothesis. Both party attention in newspapers and online attention increase the probability to vote for that party. Thus, parties profit from attention, with each additional encounter of the party in the newspaper increasing the odds to vote for that party with 0.1%. This is a small effect and even when someone sees a considerable amount of coverage on a certain party, the probability that this person changes their voting preference to this party remains relatively limited. The second model adds the two sentiment variables. Here, the results are only partially confirming our expectations. While newspaper sentiment has the anticipated positive effect, we find that online sentiment has a negative effect—i.e., that parties profit from negative coverage. We will further explore this finding below and reflect on this finding in the conclusion, but we have to reject the third hypothesis. Finally, we find that attention effects are larger for new parties. They profit more

**Table 2** Effects of media visibility on vote choice (logistic regression)

Voting	Attention model			Main effects model			Interaction effects model		
	OR	SE	Sig	OR	SE	Sig	OR	SE	Sig
Vote intention (W1)	56.356	3.583	***	56.883	3.629	***	56.678	3.613	***
Newspaper attention	1.001	0.000	***	1.001	0.000	***	1.001	0.000	***
Online attention	1.004	0.000	***	1.004	0.000	***	1.004	0.000	***
Newspaper sentiment				3.442	1.084	***	5.626	1.792	***
Online sentiment				0.003	0.003	***	0.012	0.015	***
New party	0.774	0.061	**	1.321	0.173	*	0.771	0.152	***
Social media expenditures	1.169	0.019	***	1.163	0.019	***	1.158	0.019	
Newspaper attention × new party	1.014	0.004	***						
Online attention × new party						1.031	0.014	***	
Age	0.998	0.001	*	0.999	0.001	0.999	0.001*		
Female	1.051	0.023	*	1.047	0.024	*	1.048	0.024	
Political interest	0.967	0.022		0.971	0.022		0.959	0.021*	
Satisfaction with democracy	0.972	0.010	*	0.975	0.011	*	0.975	0.011	
Education	0.975	0.007	***	0.978	0.007	**	0.976	0.011*	
Constant	0.005	0.001	***	0.003	0.001	***	0.003	0.001***	
Pseudo R <sup>2</sup>	0.328			0.329			0.330		

$N = 54,162$ . \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$



from media visibility than those parties that already have a place in parliament, as can be seen in the final model. Both interactions between the new party dummy and the attention scores are positive and significant. Effects are substantial, with each time a respondent is exposed to a new party in newspaper coverage an additional increase in the odds of 1.3% and even 3.1% for online coverage, compared to 0.1% and 0.4% for established parties, respectively. It is, however, important to keep in mind that new parties receive small support and that they might have grown due to media coverage in relative terms, but in substantial terms, the effects remain limited. Still, we can clearly confirm our second hypothesis.

Our control variables provide one important additional insight. There is a very small positive effect of social media expenditures on the party level: the more parties spend on their campaign, the more support they gain. Additional analyses reveal that results are largely robust. First, when repeating the main analysis excluding one of the new parties at the time, we find that findings remain largely similar. Only for online sentiment, we find that the (surprising) negative effect disappears when the Freedom Party (PVV) or the farmer's party (BBB) is excluded. Given the populist nature of both parties, it might not come as a surprise that in particular those parties profit from negative coverage and an underdog effect: their potential voters might be more inclined to vote for them if they are portrayed in a negative manner. Furthermore, we explore the interaction between visibility and sentiment and demonstrate that both for offline and online coverage, reinforcing effects exist (see Table E2). In both instances, we find that the effects of visibility on vote intention increase when the coverage is more positive, as signaled by the positive coefficients for the interaction terms. We can thus answer research question 1 affirmative: indeed attention and sentiment reinforce each other. Additionally, we investigated whether newspaper effects are driven by a certain type of outlet and whether differences exist between the effects of quality (*NRC Handelsblad*, *de Volkskrant*, *Trouw*, *Financieel Dagblad*) and broadsheet (*Algemeen Dagblad*, *de Telegraaf*). Results are presented in Table E3 and reveal that both type of newspapers have similar effects: more attention and positive sentiment yield slightly higher voting preferences for a party.

## Discussion

This paper set out to investigate whether traditional media still co-determine election campaigns and still are consequential for the election outcome. Based on our study of the 2021 Dutch Parliamentary Elections, the answer is affirmative. Traditional media are still of importance, even in a time of digitalization, increased (audience) fragmentation and parties that focus their campaign efforts more and more on personalized communication through social media (Kruikemeier et al. 2016). Although social media platforms have changed where citizens get their political information during election campaigns, traditional offline or non-social online media outlets still have a function. The results we find in this study are largely in line with earlier findings: media attention matters—and in particular for parties that were not in parliament yet. It is important to re-iterate that those effects are small and media are



one among the many factors that determine voting decisions. These findings are in line with previous agenda setting and priming studies and underline the particular importance of media attention for less established entities to gain legitimacy. The findings for a second element we study are more surprising. While we find sentiment in newspaper to affect vote choice in the expected way, online sentiment has an unexpected negative effect. Several explanations might account for this. First, methodologically, the reliability of our sentiment measure leaves room for improvement and consequently, estimation of effects might not be overly reliable. Second, it might be that negative coverage might help parties to stand out. In particular in a context with so many political parties compete for parliamentary seats, anything that helps to stand out might be to some degree beneficial to parties. Being criticized by other, competing, parties, might yield a negative sentiment, but also signal to voters the relevance of the attacked party (Kleinnijenhuis et al. 2007). Our analyses demonstrate that effects are driven by populist parties PVV and BBB where such an underdog effect might be particularly pronounced.

This study is not without shortcomings. We mention three here. First, while it is valuable to use linkage analysis to study the role of traditional media in the 2021 Dutch parliamentary elections, this analysis comes with different challenges and choices (de Vreese et al. 2017). The individualized exposure scores are only an approximation of the content people actually saw from the investigated sources. Processes of selective exposure and attention might be in place with people only focusing their attention on news of a limited set of political parties. Second, we only took into account a limited amount of media, excluding for example television news or televised debates. This entails that we only capture part of the media content people are exposed to, providing us only a partial picture of information effects. Third and related, also other types of information people receive throughout the campaign are largely neglected. Both interpersonal communication and exposure to ads on social media are not taken into account. In particular, the latter plays an important role in current election campaigns. Our analyses indeed suggest that expenditures on social media ads seem to affect support on the party level, but more detailed analyses are warranted. Alternatively, future research designs could attempt to obtain insights in digital traces that voters leave through their use of various online platforms using a data donation platform. A more comprehensive study would provide a more detailed account of information people are exposed to and consequently allow for a more thorough assessment of campaign effects.

Despite the fact that our study only provides a partial look into the role traditional media play in current election campaigns, it is safe to conclude that they are still key in the information provision to voters and have a small, yet meaningful impact on electoral outcomes.

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## Declarations

**Conflict of interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

**Data available** Data and code are available at <https://github.com/rensvliegthart/acta>.

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