Issue Developments in a Mediated Society: The Endogenous Relationship Between

Media and the Public on the Issue of European Integration

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Abstract

Issue-development processes are often unclear and seemingly unpredictable. In this study we aim to clarify the mutual influences through which the European integration issue develops by looking at the main valence and the presence of conflict frames in the news, their effects on public opinion and vice versa. We do so by applying vector auto-regression and structural equation modeling on bi-yearly data between 1997 and 2008 within four European countries. Looking at the reciprocal connection of trend in media and public opinion. Our main findings are that there are positive reciprocal influences with regard to news valence and opinions regarding European integration. Which indicate that positivism can be transferable from media to the public and vice versa. With regard to polarization, there is a negative effect on conflict frames but no effect the other way around. Showing that media do respond to the public's direction in opinion, but that they stabilize rather than catalyze.

Keywords: Issue development, media, public opinion, European integration

Several processes determine the position of a political issue in a society: its prominence, its valence and the degree of polarization. Different societal domains are responsible for the development of an issue. And as these domains interrelate, the issue (re)shapes in a continuing process until it stabilizes or becomes redundant. Arguably, issue development processes can be seen as a product of the interplay between three main domains: political elites, media and the public. For instance, politicians and political elites make use of the media for getting their message across to their electorate, while media pick up on the best stories to sell to their audiences and audiences use the information to get informed or opinionated, which is used by politicians and media to form respectively policies and messages.

However, in our quest to find out more about the relationships between these three domains we found that extant research suffers from two major drawbacks, 1) though these reciprocal processes of issue developments are recognized and theorized as simultaneous processes in the literature, they are often analyzed as exogenous relationships (Bartels, 1993; Kinder, 1998); 2) the role of media as the main transmitter of political information to the public is often neglected or submerged by the role of elite communication (see for example Bartels, 2000; de Vries & Edwards, 2009; Layman & Carsey, 2000; Schlesinger, 1985). With this one eliminates the idea that non-political actors may provide information and have an influence as well. With this study we aim to fill these voids and attempt to get a greater understanding of the reciprocal relationship between the media and public domain. The main question of this study therefore reads: To what extent and in what way are issue-developments in media and public opinion connected to one another?

Especially today, in a rapidly changing media environment and constantly available news influxes, issues are bound to have the ability to penetrate society more rapidly than ever. With the emerging of the Internet, news has become faster and more

interactive than ever before, creating greater competition among news outlets and a changed relationship between media and their audiences (Dimmick, Chen & Lee, 2004). Though we can assume that there are direct influences between media and the public opinion, we do not actually know it unless we test it. The exploration of the reciprocal connection calls for a longitudinal approach, but since these are costly, time-consuming and come with great methodological challenges, there is little information available (with the notable exception of Gabel & Scheve, 2007; Vliegenthart et al., 2008).

For this study we managed to collect, code and connect bi-yearly public opinion and coded media data from four Western-European countries; that is Denmark, Sweden, the Netherlands and Belgium between the period of 1997 and 2009. Countries, which are compatible with regard to economic developments, media and electoral system. In this study we pay specific attention to the developments of the European integration issue. With the use of two different types of time-series analyses we try to overcome the drawbacks that these types of data usually have. By comparing the results of *vector autoregressive analyses* with those of *structural equation modeling* we aim to get closer to the comprehension of the reciprocal relationship between media and the public.

Theory

Media Valence and Public Support

The political issue we wish to investigate (i.e., European integration) is one that received relatively little attention from political leaders, the media or the public. Because it is not always a salient, but still an ever-present topic, the underlying mechanism of issue developments is more likely to have settled. For instance, political elites have taken their positions, and media reports are rather steady. This sort of equilibrium is important in these types of longitudinal research, as any form of (structural) change in the underlying mechanism could affect the results.

It has also been established that obtain their information about the EU by means of mass media (Vliegenthart, Schuck, Boomgaarden, and de Vreese, 2008); hence, it is likely that the *media* have an influence on *public opinion*. Still, the two dynamics were rarely connected in political communication (Vliegenthart *et al.*, 2008). According to Vliegenthart *et al.* (2008) the role of news media affecting public opinion with regard to European integration warrants greater attention. In their research they paid specific attention to the dynamics in these two arenas in EU member states, and they observed how the presence of certain news frames could explain increases and decreases in EU support. The current study broadens this approach in two ways: by looking at the mutual influences of *valence* in news messages and EU *support*, as well as the connection between *conflicting* arguments in news messages and public *polarization* on the issue.

In this section we focus on the first of the two innovations. Iyengar and Kinder (1987) found a strong connection between the issues that media pay ample attention to and the issues found important by the public. They conclude that by attending to some problems and ignoring others, television news shapes the American public's political priority. This agenda-setting function of media (McCombs & Shaw, 1972) appears to be apt in today's European society still, as media are now omnipresent and effortlessly accessible, they could easily (re)shape the public agenda. As people perceive media as their most prominent source of information about the EU, with little competition from other sources, media should be rather powerful not only in setting the public agenda, but also in giving a direction to the public debate (i.e., second-level agenda setting).

Whereas the first-level agenda-setting theory is concerned with *what* is put on the public agenda by the media, second-level agenda setting (or attribute agenda setting) is more concerned with *how* specific attributes of an issue influence the public agenda. In this part of the theory the focus shifts "… from a focus on the media's role in telling us "what to think about" to their function of telling us "how to think about" subjects."

(Balmas & Sheafer, 2010, p. 206). Balmas and Sheafer (2010) found for example that the evaluation of the suitability of the candidate is dependent upon the prominent tone of the media's candidate attributes. In addition, Kim and McCombs (2007) in their analyses on the 2002 gubernatorial and US senatorial elections state that negative and positive coverage of attributes in the news relates to similar opinions about the candidate. When relating these findings to the current study, it is very likely that the valence the media put forward on the EU mirrors in the overall public opinion on European integration.

> *H1a: Higher levels of positive valence in news messages cause greater public support for the European Union.*

Though there is little competition from information sources outside the media, the increase in commercial broadcasters in the 1980s and 1990s (Blumler & Kavanagh. 1999) added to the rivalry amongst media news outlets. On the one hand there is the increase in television stations and news networks. On the other hand, with the rise of the Internet and the increased accessibility and variety of the most recent news there is a decreasing demand for daily printed outlets (Dimmick, Chen & Lee, 2004). Due to increased competition news media have commercialized in order to gain and/or retain an audience. It also caused a necessity for journalists to be increasingly responsive to their audience (Hallin & Mancini, 2004). Hence, they have to pay more attention to what the public considers to be important, how the public thinks about the topic, and reply to this in the appropriate way.

Another cause for this agenda-building (a.k.a reversed agenda-setting) effect is the open character of the Internet. The Internet enables everyone to portrait their views and thereby notifying other online users on *what* is important and *how* it is important. This information may spread though blogs, personal homepages or social media. The circle is complete when traditional media report about the online agenda to the public (Kim & Lee, 2006). In other words the public are not only copying, they are building the

agenda. This could mean that when the prominent perception about the European

Union is positive among the public, the media should respond by positively portraying

the issue in the media.

> *H1b: EU support among the public causes relatively more positively valenced news messages about the European Union.*

Conflict Framing and Polarization

Though the theories find there roots in different disciplines there is no doubt

that attribute agenda setting and framing effects theories show similarities (Scheufele &

Tewksbury, 2007). How attributes are discussed (or framed) may affect how people

perceive a topic. However, only when an effect concerns a substantial part of the

public—so when it affects the public agenda—we can say that there is an agenda-setting

effect. Whereas framing effects can also show on the individual level. So where agenda

setting is strictly a macro level construct, framing is both a macro and micro-level

construct (Scheufele, 1999). This does not rule out the fact that the expected outcome of

the agenda-setting theory can be the same as that of framing effects.

Frames are described as "…subtle alterations in the statement or presentation of

judgment and choice problems […] 'framing effects' refers to changes in decision

outcomes resulting from these alterations."(Iyengar, 1991; p. 11). Especially with regard

to political issues frames are said to act as a guide for political preferences (Sniderman &

Theriault, 2004), since a fast majority of people hold ambiguous considerations towards

political issues (Nelson & Kinder, 1996; Zaller, 1992). However, there needs to be an

evident valence in the frame in order for this to apply. This is not the case with conflict

framing, which is characterized by the presence of two opposing positions at the very

least. Still, conflict frames are often applied to political issues, as it tends to fit well with

politically related topics such as discussions about war, competition or winning (Jamieson,

1992; Patterson, 1993). The frame is known to be an audience enticer (Valkenburg,

Semetko, & de Vreese, 1999), but its influence on the public is likely to be different that that of frames that portrait one clear position.

Because a clear valence is missing the audience is guided into various directions, which is likely to result in a spread in attitudes (Zaller, 1992). When the media landscape is dominated by EU messages that hold a diversity of positions personal differences may play a role in how people respond to such media. And the more diffuse news messages become, the more people are confronted with conflicting positions about the same topic, the more polarized the audience will become.

H2a: More conflict framing in news messages causes greater diversity in public attitudes.

Meanwhile, when we address the reversed causal relationship between the two arenas (public opinion affecting media content) the responsiveness-argument that we discussed earlier still holds, that is to say that when the public polarizes over the European integration issue, media should be responsive by sending out messages with different positions. There is strong evidence that people are selective in seeking information, and base their selection on the relevance of a message at a given point in time (see for example Broadbent, 1977; Tolley & Bogart, 1994). By applying a conflict frame a message becomes more relevant to a greater number of people, as it increases the odds of their opinion being represented by the media outlet. This in turn creates a bigger potential audience than sticking to single-argument frames.

H2b: Greater diversity in public attitudes causes for more conflict framing to appear in news messages.

Data and Methods

In this study we assess assumptions related to how variation of media characteristics influence public opinion and vice versa. Media data were collected over a eleven-year period (1997-2008). With our selection of countries we chose a most similar system design to control for concomitant variation, by selecting countries that are

compatible with regard to the economic situation (all in the top-20 of the OECD GDP rank list), political system (all multi-party systems), and media news outlets (a combination of public and private television broadcasters; quality and tabloid newspapers), and they are all long-term EU members. And so we also aimed to keep every element of data collection the same for each country.

The newspapers in our sample should give a representative indication of the news environment at a certain moment in time, and be comparable over countries. Therefore we decided to select at least one tabloid and one quality newspaper when possible for each country, with the exception of Belgium, where only quality newspapers were selected. Eventually we collected a total of eight different newspapers for the five regions: Le soir for Walloon, de Standaard for Flanders, De Telegraaf and de Volkskrant for the Netherlands, Jyllands posten and Politiken for Denmark, and Aftonbladet and Dagens Nyheter for Sweden.

The search string[1] to collect the appropriate data was created in Dutch and translated into Flamish, French, Swedish and Danish with the help of native speakers who were familiar with their county's political situation and appropriate vocabulary. Articles were collected from all pages in the newspaper, with the exception of the Flamish and Walloon data. For the Belgian regions we were able to collect only front, second, and third page news. A random sample was drawn from the data and coded by native speaking coders (krippendorf-alpha: .86), again with the exception of Belgium where all the collected data was coded. This resulted in a total of 3075 coded articles, 1.02 percent of the total number of articles (302,008) about European integration[2]. Before the coding started a screening question was asked to ensure only the relevant data was coded.

Operationalization

For the first public opinion variable we used multiple waves from the eurobarometer. From this we used the question concerning the *general support for the European Union*: 'Generally speaking, do you think that (YOUR COUNTRY'S) membership of the European Union is a good thing, bad thing, or neither good nor bad?' The data were aggregated into bi-yearly figures for each country to measure the percentage of people who thought that the membership is a good thing. The second variable is made out of the same question but represents the aggregated standard deviation per time period and country. The bigger the standard deviation the wider the spread around the mean, the bigger the level of polarization about the issue.

The third variable measures the level of positive *valence* in the news about the European Union. The coders answered the following question with regard to the material: 'How would you say the main topic is discussed?' This could be coded 'in a negative way', 'in a balanced way', 'in a positive way' or, 'in a neutral way'. Again the data were also aggregated into bi-yearly figures for each country to measure the percentage of articles that discussed the topic in a positive way. Fourth, we coded the presence of conflict framing, which is measured with the use of three questions: "Does the material show disagreement between countries / groups / individuals / parties?"; "Does one country / group / individual / party reproach another?" and "Does the material give insight into two or more sides of the issue?" If at least two out of these three questions were answered positively, we counted it as conflict framing. This was aggregated to represent the percentage of messages that contained conflict framing over period and context.

As controls we added key-events that are relevant in relation to the European integration issue. In the last decades several events have taken place that may have influenced the general picture in the media and among the public. For the Netherlands one may think about the referendum on the treaty establishing a European constitution

in June 2005, where a fast majority voted against. The rotating presidency for the council of the European Union (Belgium in July to December 2001 and July to December 2010; The Netherlands in January to June 1997 and July to June 2004; Denmark in July to December 2002; and Sweden from January to June 2001 and from July to December 2009). In Belgium and the Netherlands the entrance of the Euro in January 2002, and in all countries the 1999, 2004, and 2009 European parliamentary elections. Hence, we included a dummy variable representing these events.

Furthermore, we added unemployment rates, which is the number of people unemployed out of the total number of people who work or are of a working age but unemployed (the working force). These data were obtained from the Eurostat website, together with immigration rates. These represent the total percentage of asylum applications relative to the total number of people living in a country.

Analyses

In this study we use time-series data, which means that the observations are measured over a longer period of time. We decided to estimate the results with vector autoregressive analyses (VAR) as well as structural equation modeling (SEQ). Where SEQ is based on a priori theoretical assumptions of exogenous and endogenous variables, VAR recognizes multiple theories by including all variables as endogenous. We use the latter as a check to see whether it is empirically logical to assume what we assume, or if there are other logical endogenous relationships present in the data, before we test the hypotheses using the former.

SEQ enables us to estimate the models while accounting for endogenous relationships, as it allows us to calculate the two regressions simultaneously. However, there is some criticism on the use of structural equation modeling with time-series data, because of its a priori nature (Brandt & Williams, 2007). Also, it has some strict requirements and there are little alternatives in case these requirements are not met.

However, VAR analyses are perceived as a-theoretical and not parsimonious, and though one cannot calculate two regressions simultaneously as with SEQ models, it is more flexible as it provides alternatives in case the assumptions are not met. The combination of the two approaches should give a more accurate indication of what is happening in the time series.

Checks and Descriptive Statistics

One of the requirements for using VAR analysis is that the data are stationary, but before we perform the necessary checks we need to know how many lags we should include in our models. Typically VAR models include enough lags in order to capture the full cycle in the data, which means that in our data (half yearly measurement) we would at least have to include 2 lags to capture a full season. As a rule of thumb one should not include more lags than a quarter of your degrees of freedom, hence with our 24 data point, no more than 6. But this number also depends on the number of variables one intends to include in the model. According to the AIC, HQIC and SBIC criteria 3 lags should be sufficient. As we introduce five variables in each model, we wish to include 2 lags in order not to over specify the model and end up with spurious results, meanwhile adding the a whole prior year as potentially influential.

To test whether the data are stationary we performed a Dicky-Fuller test with two time lags, on our four dependent variables for each country. We found that membership attitudes are non-stationary and steadily go up ($Z_{(21)}$ = -0.995; p = 0.76). There is also a small trend in the polarization measure ($Z_{(21)}$ = -0.63; p = 0.86). Although the test results might not indicate this, from the autocorrelation matrix we can conclude that the biggest problem concerning non-stationarity is with the former variable. The media data show no unit root over the time period. However, due to non-stationarity in the public opinion data the series have to be differenced in the VAR models.

It is generally recommended to check whether there are substantial country specific differences in the dependent variable that are not captured by the models' independent variables. By checking for fixed effects we can see if these country differences are systematic (e.g., Kittel, 1999; Wilson & butler, 2007; Vliegenthart et al., 2007). With the inclusion of all independent variables the results of these tests indicate that there are no systematic differences between countries.[4] This tells us that we should be able create a parsimonious model over all countries, as there are no country specific dynamics.

With regard to the SEQ-modeling three requirements need to be met before one is certain to get unbiased results (Kline, 2005). As with any form of time-series analyses, the feasibility of all these requirements is disputable, but nevertheless they should be attended to and any problems should be appropriately dealt with if possible. The first requirement is that the data is stationary. Second, is the requirement of equilibrium: the system underlying your estimations the presumed feedback relation should have come to a stand-still, meaning that changes in the system should have manifested their effects already. This is something we addressed earlier and cannot be tested with the limited number of time points we have in the data. Therefore ,we have to assume so by selecting the right topic and units of analyses. Third, the exogenous variables in the model should not have any common omitted variables.[3] We know that at least one of the three assumptions is not met, however SEQ does not give any alternative but not to perform the analyses. As this is not an option we need to be careful with the interpretation of our results, especially when they are not in line with the results of the VAR analyses.

Since our data is collected in different countries, our time series are pooled and we need to check if this influences the error terms. In other words, if these error terms are different across the units of analysis and therefore there is panel heteroskedescity. Wald tests on panel-heteroskedescity indicate that the error terms differ for each

dependent variable. The alternative way to deal with this is to include lagged-dependent

variables to the equation (Beck and Katz, 1995), which we will do in analyses.

Results

Before turning to the time series analyses and to get a feel for the characteristics

of our dataset, Figure and Table below provide us with somewhat more descriptive

information about our data. Figure 1 shows the fluctuations and trends in the dependent

variables over the entire period of time. Here we see that, there are no major fluctuations,

the fluctuations we do are mostly in conflict and valence frames. With the biggest peak

of conflict frames in the first half of 1998, in which 44 percent of the articles on the

topic contained a conflict frame. The peak regarding positive valence shows in the

second half of 1999 and the first half of 2000, where a respectively 35 and 37 percent of

the data contain this frame. It is only late 2004 when it reaches these heights again.

Figure 1 *Fluctuations of the Key Variables Over All Five Geographical Regions, 1997-2008*
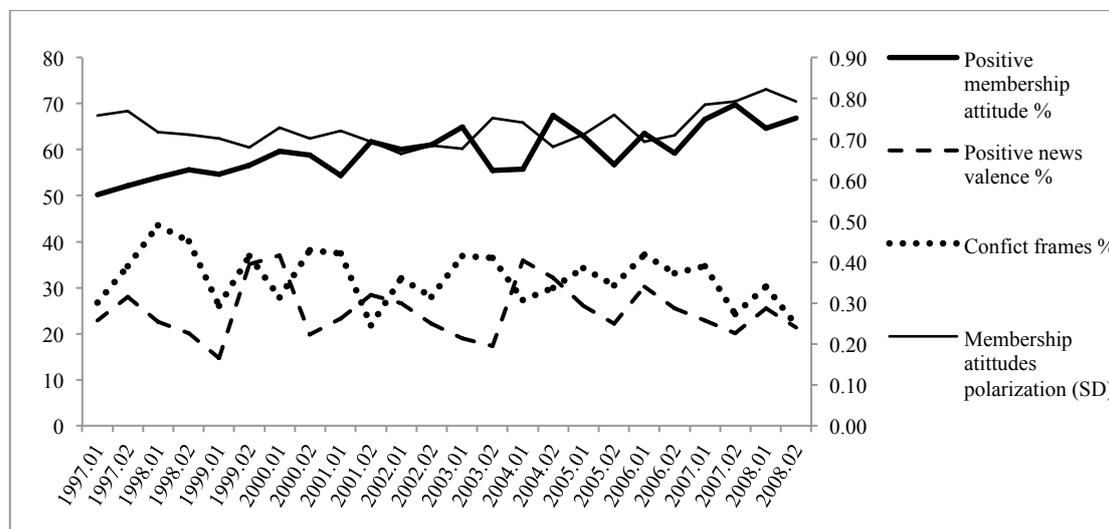
Note. Source of public opinion data: Eurobarometer.

In each country we were able to collect 24 time points and we can see that there

are some differences in the statistics for each country during that time period. In Table 1

it shows that the average level of positive EU attitudes is much lower in Sweden (42.24

percent) then in the other four countries, and while this is much higher in Flanders (63.3

percent) their score is much less stable over time (standard deviation is 10, where it is

7.84 in Sweden). Positive valence is highest in Flanders (40.63 percent), and like public

opinion it is the lowest in Sweden (14.6 percent). With regard to the polarization measure

(standard deviation in EU attitude) we see that Sweden is the most ambivalent country

($M = 0.84$), but relatively stable over time ($SD = 0.02$). Whereas the Netherlands scores

much lower ($M = 0.63$) but less stable ($SD = 0.06$). Conflict framing shows highest in the

Netherlands and Walloon (respectively 42.48 and 40.79 percent).

Table 1 *Within Country Descriptive Statistics of All Relevant Variables, 1997-2008*

	N	Minimum	Maximum	M	SD
% Positive EU attitudes					
Flanders	24	45.11	77.99	63.30	10.00
Walloon	24	49.20	69.53	59.66	6.26
The Netherlands	24	63.80	81.65	74.92	4.48
Denmark	24	47.72	69.29	59.35	5.70
Sweden	24	28.51	58.99	42.24	7.84
SD EU attitudes					
Flanders	24	0.54	0.81	0.68	0.07
Walloon	24	0.62	0.90	0.71	0.08
The Netherlands	24	0.54	0.75	0.63	0.06
Denmark	24	0.69	0.85	0.79	0.04
Sweden	24	0.78	0.88	0.84	0.02
% Positive valence					
Flanders	24	0.00	70.00	40.63	15.34
Walloon	24	0.00	60.00	22.90	14.71
The Netherlands	24	15.38	58.33	29.86	10.10
Denmark	24	3.57	29.17	17.10	7.30
Sweden	24	0.00	23.53	14.60	6.16
% of articles with conflict framing					
Flanders	24	0.00	80.00	40.79	22.74
Walloon	24	0.00	50.00	19.57	13.60
The Netherlands	24	23.53	66.67	42.48	10.66
Denmark	24	7.69	36.00	24.01	6.80
Sweden	24	16.67	55.56	33.07	9.80
Unemployment rates					
Flanders	24	6.40	9.40	7.99	0.90
Walloon	24	6.40	9.40	7.99	0.90
The Netherlands	24	2.55	5.70	3.96	0.96
Denmark	24	3.25	5.55	4.63	0.68
Sweden	24	5.30	10.30	6.92	1.22
Immigration rates					
Flanders	24	0.04	0.27	0.10	0.06
Walloon	24	0.04	0.27	0.10	0.06
The Netherlands	24	0.02	0.14	0.07	0.04

Denmark	24	0.02	0.12	0.05	0.03
Sweden	24	0.05	0.21	0.12	0.05
Key-events					
Flanders	24	0.00	1.00	0.21	0.41
Walloon	24	0.00	1.00	0.21	0.41
The Netherlands	24	0.00	1.00	0.29	0.46
Denmark	24	0.00	1.00	0.17	0.38
Sweden	24	0.00	1.00	0.17	0.38

Note. Source of public opinion data: Eurobarometer.

Influences of Media and the Public Using VAR

Regarding the time-series analyses, we start with VAR analysis to see if our theoretical assumptions of endogenous relationships make empirical sense. In this section we conduct causality tests using OLS regression in order to detect the connectivity between the variables and to find empirical evidence of whether the variables have any explanatory influence on one other. After which we perform granger VAR analyses.

Our first findings indicate that not many of the variables have a significant effect on the other variables in the dataset. With regard to our (a priori determined) two dependent variables we find that (under control of the other variables) the lagged variables of positive news messages only just have significant effect on positive membership attitudes (b_{L1} = .17, b_{L2} = .21; $F(2, 10) = 2.86$, $p(F)$ = .1). Vice versa this does not seem to be the case (b_{L1} = -.94, b_{L2} = -.30; $F(2, 10) = 2.19$, $p = .16$). Yet, the granger VAR test indicates differently, here we find that significant causal relationships in both directions. Meanwhile, there are also some endogenous effects of, and on the three control variables. Because the results do not all make theoretical sense we will rely on theory and interpret the results of our two dependent variables. Here we find that, under control of the other variables, there is a significant causal effect of the tone in the media on membership attitudes (Wald-$X^2 = 9.18$; $p = 0.1$) and vice versa (Wald-$X^2 = 12.00$; $p < 0.01$).

The relationship between media and the public with regard to positive tone and positive attitudes is reciprocal. However, the coefficients we showed stem from an OLS regression, which does not control for the fact that the two regressions are correlated. This may lead to biased results; hence, for the direction of the coefficients we rely on the results from the SEQ models. As the VAR results are somewhat ambiguous with regard to the controls, we decided the include all of the controls in the initial SEQ models, only when they do not have an effect on the dependent variables or on the other relationships do we exclude them from the SEQ model.

The OLS regressions including polarization on membership attitudes and conflict framing showed insignificant with regard to all endogenous relationships. The results with regard to our two dependent variables showed that conflict framing did not cause polarization (b_{L1}= .00, b_{L2}= -.00; $F(2, 10) = 2.79$, $p(F)$= .11), or vice versa (b_{L1}= -32.18, b_{L2}= 23.31; $F(2, 10) = .44$, $p = .66$). Again the VAR results indicated differently, as we found that polarization does influence conflict framing (Wald-$X^2 = 11.73$; $p < 0.01$), but not the other way around (Wald-$X^2 = 1.84$; $p = 0.40$). We also found a theoretically logical causality of key-events on conflict framing (Wald-$X^2 = 4.98$; $p = 0.08$). Hence, we will include this variable, but also the other two control variables in the SEQ model.

Simultaneous Influences of Media and the Public Using SEQ

In this section we test the hypotheses with SEQ models. The Figure below shows a schematic overview of the main expected correlation between media and public opinion of both hypothesis 1 and 2. Hypothesis 1, where we expect a positive effect of a positive media valence on support for European integration (arrow a) and vice versa (arrow b); and hypothesis 2 where we expect conflict framing to positively influence polarization among the public (arrow a) and vice versa (arrow b). Meanwhile we control for the effect of the lagged dependent variables (arrow c and d), and estimate the covariance between these two (arrow *e*).

Figure 1   *Schematic Overview of the Expected Relationships, Cross-Lagged Models*
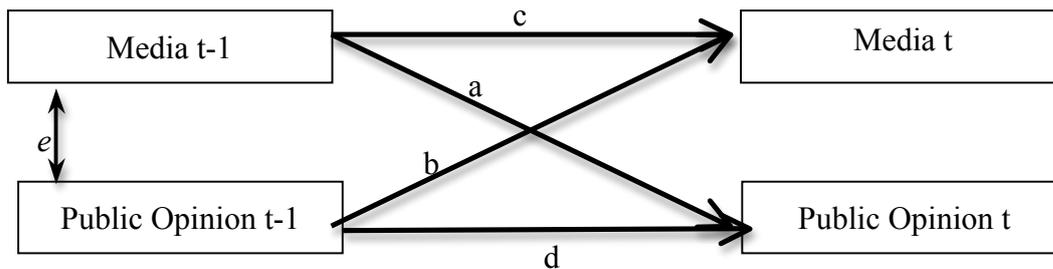
The letters in Figure 1 correspond to those in Table 2 where Model 1 represents

the model with membership attitudes and positive valence framing en Model 2 the model

with polarization and conflict framing. Model 1 shows a marginal model fit (CFI = 0.96;

RMSEA: 0.29). The coefficients indicate that a higher degree of positive opinions

stimulates positive news framing. The opposite relationship is also positive and

significant. The latter is partly due to the inclusion of unemployment rates, which shows

to have a significant negative effect on public opinion, but mostly a strong effect on

media valence. Which means that unemployment rates act as a suppressor on the two

main effects.

Though key events show to have a significant influence on public opinion, they

do not affect media valence or the strength of the other effects. Overall, alike the results

from the VAR analyses, there appear to be a simultaneous positive influence of public

opinion on media and vice versa. The effect of public opinion is a bit more stable and

stronger than the other way around. Also there is a small suppression effect of

unemployment rates, which mostly affects the latter relationship. Immigration rates were

excluded from the model, as they did not have an effect on the dependent variable, or on

any of the other relationships in the model. We can conclude that these results comply

with hypothesis 1a and 1b.

Table 2 *Cross-Lagged Model of Positive News Valence & Positive Public Opinions on European*

Integration (1); Conflict Framing Model & Polarization of Public Opinion (2)

	Model 1	Model 2
a	0.08** (0.04)	0.00 (0.00)
b	0.36† (0.12)	-28.82** (14.46)
c	0.19** (0.10)	0.42† (0.09)
d	0.78† (0.05)	0.84† (0.05)
e	72.69 (18.45)	-0.46 (0.15)
Controls		
Key events → Media	3.23 (2.96)	-0.96 (3.25)
Key events → PO	3.96† (1.23)	-0.2* (0.01)
Unemployment → Media	1.91† (0.73)	-0.12 (0.67)
Unemployment → PO	-0.52* (0.30)	0.00 (0.00)
Immigration → Media		5.03 (25.00)
Immigration → PO		-0.08 (0.8)
CFI; RMSEA	0.96; 0.29	1.00; 0.00

Note. * significant at $p \leq .10$; ** significant at $p \leq .05$; † significant at $p \leq .01$; $n = 120$ (24 observations * 5 countries); Source Public Opinion Data: Eurobarometer 97-08. Standard arrows show between parentheses. All path coefficients are unstandardized coefficients.

Continuing to Model 2, we find that there is no influence of conflict framing on

public opinion in each of the models. However, in line with the results from the VAR-

models, there is a significant influence of polarization on conflict framing. What we

miraculously find is that polarization reduces conflict framing rather than enhances it (b=

-28.68). The model shows a good fit (CFI: 1.00; RMSEA: 0.00). These results do not

comply with the idea that both effects should strengthen one another and therefore do

not confirm hypothesis 2a and 2b.

Conclusion

Eleven years of newspaper data were collected, coded and laid alongside extant

public opinion data. With the use of vector autoregression we manage to find out if there

were endogenous relationships between our variables, and with the use of structural

equation modeling simultaneous influences have been analyzed. We found that higher

levels of positive valence in news media create greater public support, but this effect was

only marginal in comparison to the reversed effect. Since our approach is relatively new, there is little academic literature that applied macro level approach alike ours (with the exception of Vliegenthart *et al.,* 2008). Prior micro-level research did find that media matter in explaining attitudes toward the EU (de Vreese & Boomgaarden, 2006; Schuck & de Vreese, 2006). Our findings are in line with these findings, as these have shown too that tone in news coverage influence EU attitudes. The results also comply with the second level agenda-setting theory, which states that the way that media discuss the issue is picked up and mirrored by the public.

Meanwhile, we also found that media's response to public opinion is even bigger than the other way around. A finding that is as much surprising as it is innovative. The public is often considered inferior to media and effects are mostly only investigated the other way around. Yet we find that media are perhaps more responsive than we tend to think, and that the public has more of an agenda-building role than thought before. Hence, when not taking the reversed effects into consideration and by estimating single sided regressions only, one is likely to find biased and overestimated results.

Continuing to the results regarding conflict framing and polarization we found some surprising effects. First, there was no effect of the frame on polarization. Second, there was a significant negative effect of polarization on conflict framing, indicating that a more polarized audience causes for significantly less polarized news about the issue. A finding that shows that media may consider themselves to have a stabilizing function. When direction is consensus among the public, perhaps media aim (or politicians through the media send out messages) to create order by sending out directional messages. However, unsuccessfully so as the effect did not return. But perhaps, when polarization goes up media are more likely to take a side themselves and report in line with this side. Since they cannot satisfy their entire audience, they may make the decision

to go with the direction of a selection (perhaps the majority) of their audience and be responsive to them by not showing conflicting arguments.

In this study we aimed to answer the question to what extent and in what way are issue developments in media and public opinion connected to one another. Our findings showed that EU support and valence are main players in explaining developments in each of the two arenas. The reciprocal influence are both positive, the causal connection catalyzes a chain of positivity between the two domains. Since this is not the case, there must be one or more variables that put a damper on these results. One of these suppressors we have found in our analyses is: unemployment rates. Higher unemployment signals a decrease in positive EU attitudes. This is only marginally significant and so we expect there to be more, which is something to consider for future research.

Furthermore, we found that the public has a strong agenda-building function with regard to the media agenda. Whether it is an increase of valence or a decrease in conflict framing, media showed submissive to changes in public opinion. Although it is a very rough estimation in a single-issues study, the reversed effect is one that is often neglected in media effect research. We are theoretically not yet able to fully comprehend the reversed connection and it is often hard to apply it empirically, but the current study gives ground to subsequent research. Looking more thoroughly at the endogenous relationship between media and public opinion.

Note

1.   The applied search string reads: (European Unie) OR ALLCAPS(EU) OR (Europese Community) OR ALLCAPS(EC) OR (Europees Parliament) OR (Europese Commission) OR ((European Court) w/5 Justice). We applied the basic selection criteria that one of these words should be in the headline and/or text of the article at least twice.

2.   In Flanders: 14.86% (208 out of 1400), Walloon: 1.94% (233 out of 12014), the Netherlands: 1.07% (866 out of 80714), Denmark: 0.46% (781 out of 141034), Sweden: 1.48% (987 out of 66846).

3.   Gabel and Scheve (2007) recognize the latter to be a serious problem and propose an alternative approach to create unbiased results, especially if one does not control for the endogenous nature of the model otherwise. We recognize that potentially there are omitted variables that influence both dependent variables, either directly or indirectly. However, as our series are limited and one never knows exactly what factors are still missing even if one includes instrumental variables, we decided to focus on the endogenous nature factors we do measure, rather than finding the potential bias due to omitted factors.

4.   Results: 'Support for EU membership' $F(4.11) = 0.12$, $p = 0.98$; 'Polarization on EU membership' $F(4.11) = 0.07$, $p = 0.99$; 'conflict framing' $F(4.11) = 0.03$, $p = 0.998$; 'Positive valence framing' $F(4.11) = 0.05$, $p = 0.99$.

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