"Welcome" to Europe: How media and immigration affect increasing Euroscepticism

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Citation for published version (APA):
“No news is good news.”
Ludovic Halevy
CHAPTER 3: A SPIRAL OF NEGATIVITY

A Spiral of Negativity: The Reciprocal Influence Between Negative News Media and Euroscepticism

Abstract
Over the course of the last two decades, Europeans have become increasingly skeptical of the European Union. The media are said to play an important role in explaining EU attitudes, and by focusing on negative incidents, the media have the potential to fuel public Euroscepticism. This chapter investigates whether the negativity bias in the media causes individuals to become more skeptical and whether this in turn increases the negative bias in the news media. Using pooled time-series data, covering a period of twelve years and five European regions, I investigate this ‘negativity spiral’. The findings demonstrate that negatively valenced media content increases Euroscepticism, but Euroscepticism does not affect news media content. The effects of positively valenced news content are much more limited. The implications of these findings for research on public opinion about the EU are discussed.

A version of this chapter, co-authored by Rens Vliegenthart, Hajo G. Boomgaarden & Claes H. de Vreese, has been submitted for publication.
In recent decades, European Union policy has shifted from a primary focus on economic matters (Anderson & Reichert, 1995; Gabel & Whitten, 1997) to more social and cultural political aspects (Dinan, 1999). This shift became increasingly evident during the 1990s, a period considered to mark the end of an era of permissive consensus among Europe’s citizens (Hooghe & Marks, 2008). Since then, the public has become increasingly skeptical of the role of Europe (e.g., Hobolt, 2009; see chapter 1). As European integration hinges on the support of its citizens (Boomgaarden et al., 2011), it is crucial to understand why the public has become increasingly skeptical of the European Union. Furthermore, because the media are citizens’ most important source of information on EU-related topics (Eurobarometer 59, 2003; Vliegenthart et al., 2008), the effect of the media on EU-attitudes is often considered substantial. This chapter aims to investigate the potentially reciprocal relationship between the media and public opinions of the EU. Does the general valence of EU media coverage affect public attitudes towards the EU, while these public attitudes affect the general valence of EU media coverage? Moreover, does this trigger a spiral of skeptical attitudes towards the European Union?

The relationship between news media content and public opinion has been the focus of numerous studies in political communication. Public responses to changes in news coverage (e.g., Balmas & Sheafer, 2010; Kim & McCombs, 2007) and the role of the public in shaping the news have received attention in the literature (e.g., Behr & Iyengar, 1985; Zhou & Moy, 2007). However, the combination of the two, that is, the reciprocal relationship between the media domain and public opinion, remains relatively underexplored, and to my knowledge, no one has explored whether and how such a mechanism may elicit increasing Euroscepticism.

The extant literature on the influence of the media has found that a negatively valenced message is perceived as more attractive, more important and more newsworthy than a positively valenced message (Galtung & Ruge, 1965; Helson, 1964; Ju, 2008; Lang, Bradley, & Cuthbert, 1997; Kahneman & Tsversky, 1979; Sherif & Sherif, 1967; Shoemaker, 1996), even when it conveys identical information (i.e., the asymmetry bias, see Soroka, 2006). Therefore, a negativity bias regarding EU news messages causes the audience to receive a relatively large share of negatively valenced information, which makes them more skeptical of the EU and causes the negativity bias in the news media to increase. The result is a negative spiral that has led to a steady increase in Euroscepticism over time (see Slater, 2007).

Public opinion also has the potential to affect media content. Although this is not the only piece of the puzzle (see Schuck, Vliegenthart, Boomgaarden et al., 2013), this chapter focuses

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1 See Slater (2007) for a more elaborate theoretical background of reciprocal, mutually influencing processes, a.k.a. spirals.
on the link between media and public opinion and whether there is any empirical evidence for a spiral of skepticism. To assess the existence of this spiral, I use pooled time-series data (24 half-yearly observations in five European regions). This chapter will examine the proposed mechanisms over the course of a decade in five European regions (i.e., the Netherlands, Denmark, Sweden, Flanders and Wallonia). In the following sections, I will discuss my expectations regarding the influence of media content on the dynamics in public opinion, the expected influences of the public discourse on media content and the asymmetry of positive versus negative connotations regarding the European Union in each of these domains.

The News Media Affecting the Public

The extant research has found that valence in news messages can guide individual preferences, especially concerning political matters (Sniderman & Theriault, 2004). This is primarily because a vast majority of the public holds ambiguous views regarding political issues (Nelson & Kinder, 1996; Zaller, 1992; 1996). Previous studies have found that the general valence in media messages can affect attitudes to a large extent. For instance, Balmas and Shefer (2010) found that evaluations of the suitability of a political candidate are dependent on the prominent tone in the media. Kim and McCombs (2007) found that positive and negative news coverage yielded coherent opinions of the candidate during the 2002 Texas gubernatorial and U.S. senatorial elections.

Closely related to the topic of the current chapter, De Vreese and Kandyla (2009) argued that ‘risk’- and ‘opportunity’-framing of a specific EU policy affects public support for this policy. Furthermore, support for EU enlargement can be influenced by valenced information, (De Vreese & Boomgaard, 2003) and valenced information can mobilize citizens during a EU referendum (Schuck & De Vreese 2009).

The above-mentioned studies indicate that valenced information changes public opinion in the direction of the primary valence in the news. According to public opinion theorist Zaller (1992; 1996), the flow of political information needs to be heavily one-sided (i.e., predominantly negative or positive) to change public opinion. He argues that individuals do not have a single, fixed attitude; rather, attitudes are shaped by elite communication, distributed through the mass media. An individual confronted with both a positive and a negative message on the same issue, however, will not be affected by either of the two messages, as they cancel each other out. This is most likely to occur in a media environment with an evenly balanced, ‘two-sided information flow’. However, according to Zaller, even in the presence of two-sided information flows, political information often leans heavily to one side, at least for some period of time.
CHAPTER 3

Using his Receive-Accept-Sample model (i.e., RAS), Zaller (1992) describes how a one-sided information flow can lead to attitudinal change. First, individuals receive (R) information and decide whether they accept (A) this information. When formulating an opinion, they sample (S) from the information they have accepted. Because information streams are often ambiguous, Zaller argues, individuals create opinions by averaging the considerations at hand, at the very moment they are asked to formulate their opinion.

News media form the basis of the sample of information from which individuals select opinions (Zaller, 1992). Changes in this media sample cause alterations in the balance of what most individuals consider the most relevant viewpoint, which translates into the public adopting a rough replication of the dominant tone in the mass media (e.g., Levin & Gaeth, 1988; Raghubir & Menon, 2001; Rothman & Salovey, 1997). Therefore, when a two-sided information flow is heavily biased, this will drive public opinion in one direction. Media coverage on the EU has the potential to make the public increasingly or decreasingly Eurosceptical, depending on the dominant valence in the news.

H1 (Media Effect Hypotheses): a) Negatively valenced news increases Euroscepticism, b) while positively valenced news decreases Euroscepticism.

The Public affecting the News Media

It is commonly acknowledged that the media and the public are interdependent. “Each system interacts with the other: media discourse is part of the process by which individuals construct meaning, and public opinion is part of the process by which journalists […] develop and crystallize meaning in public discourse” (Gamson & Modigliani, 1989, p. 2). However, there is little empirical evidence on the extent to which public opinion affects news media content (with the exception of Behr & Iyengar, 1985; Huang, 1995; Schuck, Vliegenthart, Boomgaard et al., 2013; Zhou & Moy, 2007).

Studies that examined public opinion as a predictor of media content obtained rather ambiguous results. For instance, Behr and Iyengar (1985) expected, but did not find, that public opinion influences media content. Huang (1995) found that media and public opinion partially overlap with respect to how they discuss a given issue, but this author made no attempt to assess the causality of the relationship. Zhou and Moy (2007) investigated the effects of online public opinion on the news media and found a strong interplay between the two. Schuck et al. (2013) found that public support for the EU led to a lower degree of conflict framing in media coverage. This ambiguity in the research findings may be a result of the substantial variety in the contexts that were studied and the different approaches that were applied. These rather mixed findings leave room for further investigation.
Furthermore, media scholars have focused on internal influences of news content, such as organizational structures or journalistic protocols (Shoemaker & Reese, 1996), story-level factors, visual features (Galtung & Ruge, 1965), journalistic values and norms (e.g., Gans, 1979; Johnstone, Slawski, & Bowman, 1972) and other aspects of the gatekeeping process (Shoemaker & Vos, 2009; see also Soroka, 2012). Attention has also been devoted to external influences such as political elites (Callaghan & Schnell, 2001; Gans, 1979) or social movements (Cooper, 2002). However, public opinion was less frequently included as an independent variable in this literature. Perhaps this is because while editors have an idea of their audience's expectations, they do not truly know what their audience wants. White (1950) repeatedly highlights this in his early work on gatekeeping.

However, the media landscape has changed, and the public's role in setting the media agenda and constructing media frames has gained societal relevance in recent decades. Europe witnessed a rise in commercial broadcasters and newspapers in the 1980s and 1990s, which contributed to the rivalry amongst news outlets (Blumler & Kavanagh, 1999). With an increasing number of potential choices, the audience became more fragmented. This transformed the status quo with respect to media's role in society, and changed the media from a supply- to a demand-oriented market (Brants & Van Praag, 2006). The assumed demands and preferences of the public became increasingly important in the selection of media content (Van Cuilenburg, 1999).

To capture the audience's attention, it became increasingly important for new, as well as traditional, news media to carefully heed their audience's preferences (Entman, 1989; Hallin & Mancini, 2004). One example of an attempt to capture the audience's attention is depicted in a study by Gentzkow and Shapiro (2010), who found that many American newspapers maximize profits by strongly adjusting their slant to conform to their reader's political preferences. Moreover, in the European context the news media invested in audience surveys to determine their audiences' preferences (Brants, 2007; Mitchell & Blumler, 1994). Because individuals tend to avoid information that is not in line with their opinions and select information compatible with their opinions (i.e., selective exposure; see Freedman & Sears, 1965), it is commercially beneficial for the news media to follow trends in public opinion and incorporate this into their news reports. The current study investigates whether the news media actually respond to their audience's preferences by reporting in accordance with the general trend in public opinion concerning the European Union:

H2 (Public Opinion Effect hypotheses): a) The higher the public support for the EU, the lower the volume of negatively valenced news messages regarding the EU, b) while the higher the degree of Euroscepticism, the higher the volume of negatively valenced news messages.
Thus far, I have argued that the media may respond to trends in public opinion, while the public is guided by the valence in the news media (i.e., a continuous spiral; see Figure 3.1). However, to explain increasing Euroscepticism, I need to assess the negativity bias of both domains. In the next section, I will develop the argument that both relationships are stronger when the information flowing from one domain to the other has a negative connotation.

**Figure 3.1  Schematic Overview of the Expected Spiral**

![Schematic Overview of the Expected Spiral]

**The Supremacy of Negativity: The Influence of the Media**

Research has demonstrated that negative information is more influential than positive information, for example with respect to public responsiveness to economic shifts (Soroka, 2006), voting behavior (Kernell, 1977; Lanoue, 1987; Soroka, 2006), and trust in governments (Niven, 2000). Psychologists argue that there are several reasons that negative information has a significantly larger impact than positive information (also known as the asymmetry bias; see Soroka, 2006).

First, human instincts are hard-wired for survival. Primal human instincts operate in such a way that they alert individuals of anything potentially harmful or life threatening. Therefore, human attention is more likely triggered by negative and potentially risky information than by positive information (Ju, 2008; Lang, Bradley, & Cuthbert, 1997; Shoemaker, 1996).

Second, a large number of studies indicated that the impact of positive or negative information is based on pre-existing expectations. Depending on the reference point, information may have a larger or smaller impact on a person. This reference point differs based on a person’s background and experiences. However, because humans are generally slightly optimistic, most individuals perceive negative information to be more extreme. On average, this causes negative information to have a greater impact on the public than positive information (Helson, 1964; Sherif & Sherif, 1967).
A SPIRAL OF NEGATIVITY

Third, according to prospect theory, responses to losses are greater than those to gains (Kahneman & Tversky, 1979). This theory was found to apply, for example to curing diseases and financial losses. However, prospect theory was also found to hold true with respect to political "loss", i.e., a change in the status quo (Schuck & De Vreese, 2009). Thus, individuals are more inclined to act when they receive negatively framed information than when they receive positively framed information.

Therefore, as a consequence of primal human instincts, humans’ (on average) slightly optimistic reference point and their disproportionate responses with respect to losses, I expect that the influence of negatively valenced information is greater than that of positively valenced information.

H3 (Media Asymmetric Effect Hypothesis): Negatively valenced news has a stronger effect on public opinion than positively valenced news.

The Supremacy of Negativity: The Influence of the Public

Many have noted the general negativity bias in the mass media (e.g., Fogarty, 2005; Goidel & Langley, 1995; Soroka, 2006). Negativity is one, and perhaps the most, important criterion on the list of factors determining newsworthiness advanced by Galtung and Ruge (1965). This list of criteria is a crude predictor of the attention the media devote to a given event.

According to Soroka (2006), this bias arises because journalists are individuals who create stories that appeal to them and their audience. Thus journalists are intrinsically and externally driven to report on negative events, as they know that negative events have a greater appeal and are regarded as more important. However, this is only one of the reasons why the news media has a predominantly negative valence.

Stories in the news media are created and selected through several journalistic norms and gatekeeping processes (Schuck et al., 2013; Soroka, 2012). However, every person involved in the process, from journalists to editors, is familiar with the fact that negative news is more unexpected, interesting, and appealing. Therefore, the same individual-level processes that account for the supremacy of negativity among the public also account for much of the negativity bias in the news media (Soroka, 2006).

Another explanation for the negativity bias in the news media, at the organizational level is the watchdog responsibility of the press. The press needs to monitor those in power and hold them accountable for their decisions (Soroka, 2006). By monitoring, identifying and reporting on potential problems, the media are performing their democratic duty. They hold governments accountable for the decisions that are made and any potential error that may result from those decisions. Therefore, the media are more likely to report on mistakes,
disadvantages and discontent concerning the EU than on successes, advantages or public support. Soroka (2006) argues that this watchdog role and ensuring accountability in governance can be connected to “the impression that negative information is a more critical indicator of government performance than is positive information. Asymmetry and accountability may be fundamentally intertwined.” (p. 374). Thus, asymmetrical responses by the news media should not be regarded as something fundamentally negative, but rather as a feature of a representative democracy. Nevertheless, in relation to public opinion, I argue that asymmetrical media responses have the potential to contribute to a more skeptical audience.

Overall, the asymmetry bias in the media is similar to that among the public. The media are more responsive to negative information; hence, they are more likely to devote attention to and report on negative cues than positive ones. Thus, the media are more likely to respond to increasing Euroscepticism than increasing support for the EU.

H4 (Public Opinion Asymmetric Effect Hypothesis): Euroscepticism is more likely to affect the valence in news reports concerning the EU than public support for the EU.

In brief, I expect that valenced coverage by the news media influences public opinion regarding the EU, while public opinion affects the valence in the news media regarding the EU (reciprocal influences). Moreover, I expect the influences of negative information and negative attitudes towards the EU will be larger than those of positively valenced news and EU support (asymmetry bias), which causes the balance in the media domain to gradually shift towards more negative news messages, while the public becomes increasingly skeptical of the European Union (i.e., the spiral of negativity). The data and methods that are used to test these assumptions will be discussed in the following section.

Data and Methods

Case selection

In this study, I apply a Most-Similar Systems Design (MSSD). This decision is based on the premise that by comparing systems that are very similar with respect to numerous relevant constitutive features, only those features in which the systems differ can generate an effect (Przeworski & Teune, 1970). This substantively reduces the number of necessary operative variables (Lijphart, 1971). The systems were selected on the basis of long-term EU members, compatibility with respect to their economic situation, political systems (all multi-party systems), media systems (a combination of public and private television broadcasters), and news media outlets (quality and tabloid newspapers), which conform to the democratic corporatist model (Hallin & Mancini, 2004). The selected countries are the Netherlands,
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Denmark, Sweden and the two Belgian districts: Flanders and Wallonia. As these are five geographical regions in four countries, I will refer to them as regions throughout the chapter.

Media data

This chapter assesses assumptions related to how news media affect public opinion and vice versa. To do so in an appropriate manner, I require longitudinal data. With regard to the news media, newspaper data were collected over the period of interest. As I expect that the media environment will affect public opinion (see also Jerit et al., 2006), these data were collected and aggregated into biannual time-series data over a twelve-year period (1997-2008). Therefore, the data contain 120 observations (24 time periods * 5 regions).

Regarding the media data, the aim was to keep every element the same for each region, from sampling to selecting and coding. Therefore, one tabloid and one quality newspaper was selected whenever possible. A total of eight newspapers were collected for the five regions: Le Soir for Wallonia, 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 used to select the relevant articles from the newspapers was created in Dutch and translated into French, Swedish and Danish, with the help of native speakers who were familiar with their country’s political situation and vocabulary. Three articles were randomly selected for each month and region. Native speakers manually coded each article.

This resulted in a total of 3075 coded articles, or 1.02 percent of the total number of articles (302,008) concerning the European Union. The units of analysis were complete newspaper articles.

To extract the valence from the articles, coders were asked to read the full article. Thereafter, they were asked to categorize the article by answering the following question:

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2 These differ with respect to language, media and, in some cases, authority and culture.
3 Due to insufficient availability of tabloid newspapers, two quality newspapers were used in Denmark.
4 The applied search string reads: (European Unie) OR ALLCAPS(EU) OR (Europese Community) OR ALLCAPS(EC) OR (European Parliament) OR (Europese Commission) OR ((European Court ) w/5 Justice). The basic selection criterion was that one of these words should appear in the headline and/or text of the article at least twice.
5 The Dutch newspapers were retrieved from the online archive LexisNexis; the Swedish from the online database Infomedia; the Danish from the online newspaper archive Retriever; and the Belgian newspapers were collected by hand and digitalized for manual coding.
6 The data were collected in the same manner for each country whenever possible, with Belgium as the main exception. Here, it was only possible to collect front-page news, until the point at which these newspapers changed from broadsheet to tabloid format (De Standaard changed on the 8th of March, 2004; Le Soir in November 2006). From this point in time, I also collected second and third page news for each newspaper. Data were missing for the year 2002, which were imputed using mean scores.
7 The percentage of data coded in Flanders was: 14.86 % (208 out of 1400 observations), in Wallonia it was 1.94 % (238 out of 12014), in the Netherlands: 1.07 % (866 out of 80714). Denmark: 0.46 % (741 out of 141034), and in Sweden: 1.48 % (987 out of 66846).
from the perspective of a Europhile: ‘How would you say the EU is discussed (i.e., in a negative way, a balanced way, a positive way, or a neutral way)? The inter-coder reliability with respect to the tone was satisfactory (Krippendorf’s alpha: 0.61; pairwise percentage agreement of 67%).

Public opinion data

For the longitudinal public opinion variables, I relied on multiple rounds of the Eurobarometer (eb47 to eb70) surveys. The following question was used concerning 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?’

Main variables

In the media data, the percentages of positively ($M = 25.02; SD = 10.72$) and negatively ($M = 34.05; SD = 11.59$) valenced articles concerning the European Union were calculated for each region over a six-month period. To measure EU support on a biannual basis, I used the regional percentage of individuals who indicated that EU membership is a good thing ($M = 59.29; SD = 6.86$). The Euroscepticism variable is created from the same question but represents the percentage of individuals who responded that membership was a bad thing ($M = 16.81; SD = 5.20$). These are the four main independent variables.

Finally, a positive-negative ratio of both media and public opinion was created. These will be the two dependent variables. The first variable represents the presence of positive news relative to that of negative news. An increase in this ratio indicates an increase in positively valenced messages relative to negatively valenced messages ($M = 0.85; SD = 0.07$). The second represents the presence of EU support relative to skepticism; a higher score indicates a rise in support relative to Euroscepticism ($M = 5.34; SD = 0.35$).

Control variables

The data contain a limited number of observations ($n = 120$), resulting in few degrees of freedom. Therefore, it is crucial to estimate a parsimonious model and consider each control variable with care. Each independent contextual characteristic should explain some of the temporal variation in the dependent variables. Additionally, it is important to exclusively consider confounding variables that substantially changed during the observation period.

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8 See the full description in Appendix 3 Table A3.1.
9 I recognize that the reliability of the tone variable is sub-optimal; hence, one should be careful when interpreting the results. Furthermore, as my interest was only in those articles that showed a particular tone, the inter-coder reliability scores were only calculated for those articles that had a particular tone, not for those that were coded ‘neutral’.
10 Notably, although the two variables were created using the same question, this will not cause any analytical problems, as the two categories are not interdependent. For example, negativity can increase while positivity also increases. The same holds for the aggregated public opinion variables.
11 Skewed variables (i.e., positive valence, support for the EU, Euroscepticism and immigration rates) were normalized, and all non-binary variables were standardized for the analyses.
(1997-2008). I add political, economic (Anderson & Reichert, 1995; Eichenberg & Dalton, 1993; Gabel & Whitten, 1997; Van Klinger et al., 2013), and social-cultural control variables (Hooghe & Marks, 2005; McLaren, 2002).

The first variable represents important political key events that are relevant to European integration: in recent decades, several events have occurred that may have influenced the general representation of the EU in the media (Boomgaarden, Vliegenthart, Schuck, & De Vreese, 2010; De Vreese & Smetko, 2004) and among the public (Hobolt, 2009). For the Netherlands, I selected the following key-event: the referendum regarding the treaty establishing a European constitution in June 2005, which a substantial majority voted against. For all regions, the rotating presidency of the council of the European Union was included (Belgium from July to December 2001 and July to December 2010; The Netherlands from January to June 1997 and July to June 2004; Denmark from July to December 2002; and Sweden from January to June 2001 and July to December 2009). In Belgium and the Netherlands, I selected the adoption of the Euro in January 2002, and in all regions the 1999, 2004, and 2009 European parliamentary elections were included. A dummy variable for each region represents the period during which these key events occurred.

Furthermore, unemployment rates are included as an important economic factor (Eichenberg & Dalton, 1993). This variable represents the number of unemployed individuals of the total number of individuals of working age. Third, immigration rates are included as a social-cultural characteristic (e.g., Hooghe & Marks, 2005; see chapter 2), which represent the total percentage of asylum applications relative to the total number of individuals living in a region. The data on the latter two variables were obtained from the Eurostat website.

**Analyses**

This study uses pooled time-series data, which means it analyzes repeated observations for all regions over time. Each observation covers a six-month period. Using these data, I test whether, for example, the valence of newspaper articles in the first six months affects public opinion in the subsequent six months.

To test the hypotheses, a method is needed that can cope with the repeated observations in several regions; I therefore employ fixed-effects models. These are hierarchical linear models on two levels (in this case, periodical observations nested within regions). This method of analysis accounts for the repeated observations within the same units of analysis (Greene,
That it is a fixed model means that the effects of variables that do not change over time are taken out (i.e., regional characteristics).\textsuperscript{12}

Pooled time-series, tests

The use of pooled time-series data requires certain standard tests to ensure that the nature of the data considered does not distort the effects. If the data exhibit any inconsistencies, these will be recognized at this stage and addressed in the most appropriate manner.

Stationarity. With respect to the two dependent variables, the Fisher test showed no unit root\textsuperscript{13}. Therefore, I am confident that it is appropriate to employ these data in a non-differenced form.

Panel heteroskedasticity. The Wald test for panel heteroskedasticity indicates that the error terms differ for the media ratio variable (i.e., panel heteroskedasticity)\textsuperscript{14}. This is controlled for by including cluster-robust standard errors in the fixed-effects models (see Beck & Katz, 1995 for additional information).

Autocorrelation. The residuals are assessed for the presence of autocorrelation – i.e., unmodeled information from the series’ past values\textsuperscript{15} – using one lagged dependent variable. The tests revealed that there is no autocorrelation in the public opinion variable, but autocorrelation was observed in the media variable. However, according to some of the standard tests (e.g., Schwarz’s Bayesian information criterion, SBIC; Stock & Watson, 1989), using one lagged dependent variable creates the most appropriate and parsimonious model. Therefore, one lagged dependent variable is added to the analytical models.

Results

Before proceeding to the results of the fixed effects models, Figure 3.2 depicts the fluctuations and trends in the four main independent variables in the five regions over the entire period. The largest fluctuations are observed in negatively valenced news, but there are also clear fluctuations in the positively valenced news. Overall, one can observe that

\textsuperscript{12} The decision to apply fixed effects rather than the more parsimonious random-effects models is based on the results of the Hausman test ($X^2 = 28.65$, $p = 0.00$, and $X^2 = 20.66$, $p = 0.00$), which indicated a misspecification of the latter (Greene, 1991). Thus, had I employed random-effects models, it would be unclear whether the observed effects are due to the differences between the regions or developments over time.

\textsuperscript{13} Media ratio: $X^2 = 120.5$, Prob $> X^2 = 0.00$; Public opinion ratio: $X^2 = 22.64$, Prob $> X^2 = 0.01$.

\textsuperscript{14} Media ratio: $X^2 = 36.75$, Prob $> X^2 = 0.00$; Public opinion ratio: $X^2 = 9.18$, Prob $> X^2 = 0.10$. To be certain that heteroskedasticity does not affect the results and because the $X^2$ test is so close to significance for the public opinion ratio, cluster-robust standard errors were also used for these models.

\textsuperscript{15} The Woodridge test (with one lag) yielded the following results for each of the four main variables: Euroscepticism $F(1, 4) = 1.59$ $p = 0.28$; EU support $F(1, 4) = 1.23$ $p = 0.33$; Positively valenced media $F(1, 4) = 4.31$ $p = 0.11$; Negatively valenced media $F(1, 4) = 14.36$ $p = 0.02$. With respect to the dependent variables, this meant that autocorrelation also appeared in the media ratio variable $F(1, 4) = 37.21$ $p = 0.003$, but none was observed in the public opinion ratio $F(1, 4) = 3.94$ $p = 0.12$. 54
negatively valenced EU messages are only slightly dominant (negativity bias), but individuals are considerably more supportive of the EU than they are Eurosceptical.

Figure 3.2  Trends in the Key Variables Across All Five Geographical Regions, 1997-2008

This Figure also reveals that a rise in negatively valenced news often coincides with a drop in positively valenced news. To see if this potentially causes a problem with collinearity in the analyses I am about to perform, I checked how strong the negative correlation is between positive and negative news ($r = -0.29; p = 0.00$), as well as between positive and negative attitudes ($r = -0.78; p = 0.00$). Since both are significant, they may influence each other’s effects in the time-series models. This means the tests are very stringent, which should be take into consideration when interpreting the results.

Reciprocal influences and asymmetry

Table 3.1 shows the results of the fixed effects models, the effects on EU attitudes and media valence respectively. The results with regard to the media effect hypotheses (H1a and H1b) show in the third row of Table 3.1, Model 1 and 2. Model 1 shows the effect of negatively valenced news messages, and Model 2 of positively valenced news on the EU attitudes ratio. It is apparent from Model 1 that there is no strong evidence that negative news affects the EU attitudes ratio ($\beta = -0.06; p = 0.07$). Negatively valenced news increases the relative presence of Euroscepticism, but the effect only borders on significance. The effect of positive news is not significant at all ($\beta = 0.01; p = 0.47$).

16 More descriptive statistics per region can be found in Table A3.1 of appendix 3.
In model 3 one can see that the effect of negatively valenced news is slightly suppressed by the presence of positively valenced news, as the former effect becomes significant with the inclusion of the second ($\beta = -0.08; p = 0.04$). These results comply with hypothesis 1a, as negatively valenced media about the EU has the ability to slightly adapt public opinion regarding the EU. There is, however, no empirical support for hypothesis 1b.

Table 3.1  
*Fixed-Effect Models, Explaining the Positivity/ Negativity Ratio of Media and Public Opinion*

<table>
<thead>
<tr>
<th>DV: Public opinion</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.05*</td>
<td>-0.04*</td>
<td>-0.05*</td>
</tr>
<tr>
<td>Lagged dep.</td>
<td>0.47***</td>
<td>0.45***</td>
<td>0.46***</td>
</tr>
<tr>
<td>Negative valence</td>
<td>-0.06*</td>
<td>-0.08**</td>
<td></td>
</tr>
<tr>
<td>Positive valence</td>
<td></td>
<td>0.01</td>
<td>-0.04</td>
</tr>
<tr>
<td>Key events</td>
<td>0.32**</td>
<td>0.31**</td>
<td>0.33**</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.02</td>
<td>-0.03</td>
<td>0.00</td>
</tr>
<tr>
<td>Immigration</td>
<td>0.16**</td>
<td>0.16**</td>
<td>0.15**</td>
</tr>
<tr>
<td>u0j: between country variance</td>
<td>0.48</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>e0j: within country variance</td>
<td>0.40</td>
<td>0.41</td>
<td>0.41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DV: Media ratio</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Lagged dep.</td>
<td>-0.14**</td>
<td>-0.12**</td>
<td></td>
</tr>
<tr>
<td>Euroscepticism</td>
<td>0.30*</td>
<td>0.18</td>
<td>0.15</td>
</tr>
<tr>
<td>Public support EU</td>
<td>-0.37</td>
<td>-0.29</td>
<td>-0.26</td>
</tr>
<tr>
<td>Key events</td>
<td>0.14</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.12</td>
<td>-0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Immigration</td>
<td>0.12*</td>
<td>-0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>u0j: between country variance</td>
<td>0.88</td>
<td>0.89</td>
<td>0.87</td>
</tr>
<tr>
<td>e0j: within country variance</td>
<td>0.85</td>
<td>0.84</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Note. $n = 120$ (24 periods * 5 regions); Source Public Opinion Data: Eurobarometer 1997-2008. One-tailed, significant at alpha * < 0.10; ** < 0.05; *** < 0.00. The coefficients in this model are standardized. All models employ cluster-robust standard errors.

The results with regard to the public opinion effect hypotheses (H2a and H2b) are depicted in the second part of Table 3.1. Model 4 shows the results with regard to Euroscepticism, 

17 The results of the control variables show that key events lead to an increase of positive attitudes, and a significant decrease of negative attitudes. Unemployment rates have little effect on media or public opinion. Increased immigration rates, which are commonly expected to increase negative attitudes towards the EU (see chapter 2), reduce Euroscepticism in the third model. The negative effects on the macro level can be explained by Allport’s (1954) intergroup contact theory, which states that under certain conditions contact between groups can create mutual appreciation. Furthermore, none of these controls affect the valence of EU messages.
A SPIRAL OF NEGATIVITY

while Model 5 shows the effects of public EU support on the valenced news ratio. The effect of Euroscepticism yields in the opposite direction of what I expected ($\beta = 0.30; p = 0.05$), but borders on significance. The effect implies that greater Euroscepticism causes a decrease of negatively valenced news messages about the EU. Model 5 shows that EU support reduces the relative presence of positive messages, but this effect is insignificant ($\beta = -0.37; p = 0.11$). Both effects are counterintuitive and insignificant when they both are added to the same model (see Model 6). Hence, these results do not comply with the public opinion effect hypotheses.

To determine whether negative information has a greater effect than positive information (i.e., Euroscepticism and negatively valenced news reports), standardized variables are used in all models in Table 3.1. As discussed above, Model 1 reveals a marginally significant effect of negatively valenced news on public opinion, which strengthens in Model 3, which also considers positively valenced. An increase in positively valenced news does not affect the EU attitude ratio. This supports the notion that negatively valenced news is more influential, albeit suppressed by positively valenced news. Therefore, this largely supports the media asymmetric effect hypothesis (H3).

The news media ratio is affected more by Euroscepticism than support for the EU, but in the opposite direction of what was expected (see Models 4 and 5). However, the effect disappears in the final model (Model 6), in which public support is also considered. Because both effects are insignificant in the latter model, the findings do not support the public opinion asymmetric effect hypothesis (H4).

Discussion

This study sought to investigate the reciprocal relationship between the media and public opinion, which could potentially lead to a spiral of negativity regarding the European Union. This could then contribute to the explanation for the increasing trend towards Euroscepticism noted by past scholars. The two main research questions were: Does the valence of EU media coverage affect public attitudes towards the EU, while these public attitudes affect the valence of EU media coverage? Moreover, does this trigger a spiral of skepticism towards the European Union?

Based on the longitudinal analysis, I conclude that the influences are not reciprocal. The findings reveal that negative news increases Euroscepticism, but Euroscepticism does not substantially affect the degree of negativity in news reports. With respect to positively valenced messages concerning the EU, the results revealed no effect on Euroscepticism or of public support affecting media coverage. This means that there is support for Zaller’s receive-accept-sample model, as the public is sensitive to fluctuations in the media
concerning the European Union (see also Sniderman & Theriault, 2004). Yet, in this case only concerning negatively toned news.

The finding that the public discourse did not have an effect on media content is perhaps not surprising when viewed in the context of the gatekeeping literature discussed above. News norms, organizational factors and the sensational character of news stories are all factors that drive journalists and editors to select certain messages over others in addition to the audience’s interest (Soroka, 2012). Additionally, as White (1950) argued in the early gatekeeping literature, the editors that make the final selection are not always aware of who their audience is and what they wish to see or hear. Of course, audience surveys (see Brants, 2007; Mitchell & Blumler, 1994) could help in this respect, but nevertheless, the topic of the EU is one of many political issues on which media can choose a slant to maximize profits (see Gentzkow & Shapiro, 2010). Perhaps editors do not regard the EU as the best topic to serve this purpose.

Thus far, I have established that the media affect public opinion to some degree, while the public does not affect the news media. This answers the first research question, but it also helps to resolve the second research question. There is no support for a continuous spiral of negativity (see Slater, 2007); however, there was support for the supremacy of negativity thesis. Negatively valenced media increased Euroscepticism, while positively valenced media produced no effect. This supports Soroka’s (2006) notion that humans are generally more responsive to negative than to positive information (asymmetrical responses). This does not create an ongoing spiral of negativity, but the media do have the ability to make the public more skeptical of the European Union.

The results of this study should be interpreted with some caution. Although the use of these newspaper data is unique in this type of study, there are some limitations to this approach. While the aim was to hold every element constant for each country and at every point in time, this appeared infeasible during the data collection process. I was unable to include a tabloid newspaper from Denmark during the period of interest. This affects the validity of the data, which may have particularly affected the between-country results. Although any country-level variation was controlled for, one should realize that the media data might be more representative of the media landscape in some countries than in others.

Furthermore, the period of analysis ended in 2008, just prior to the beginning of the economic crisis, which gave rise to severe criticisms regarding the monetary union. It is safe to assume that during the crisis, the general tone in the news media and of public opinion shifted drastically towards the negative side, thereby reshaping the relationship between the media and the public. Although it is beyond the scope of this chapter, future research could study the asymmetrical effects after 2008 to determine how increased salience affects the otherwise small, but consistent, relationship between the media and the public. However, it
is also important to determine how individuals are affected by these messages. Chapter 5 of this dissertation will address this topic.

Furthermore, one issue concerning the time-series analyses in this chapter is the predetermined period between the observations; the data were aggregated on a biannual basis. For example, some studies reveal that media effects can last from a few weeks up to several months (Boomgaarden & Vliegenthart, 2009; Dearing & Rogers 1996; Stone & McCombs, 1981), while others show that media effects disappear after a few weeks (Lecheler & De Vreese, 2011). Less information is available regarding the duration of the reverse effect (i.e., that of public opinion on the media). Due to data availability, I selected the briefest time-intervals available, which meant there was a period of six months between observations. This is a relatively large interval. Moreover, it is likely that the greatest impact appears earlier than those six months. Although the test was quite stringent, there was a clear media effect.

However, it is remarkable that an effect was observed at such a high level of aggregation, as Zaller wrote in an effort to break with the old ‘minimal effects’ tradition: "Media are able to push people around, although the net outcome might be zero" (1996, pp. 37-38). I found that the media are able to systematically drive public opinion in one direction, and it is interesting to observe how these media messages affect public opinion at large. In the next chapter, the influence of media will be explored further, specifically concerning attitudes towards immigration. The next chapter evaluates the effects of the news media and compares these to the effects of real-world developments.