The Effects of Human Interest and Conflict News Frames on the Dynamics of Political Knowledge Gains: Evidence from a Cross-national Study

Nael Jebril,* Claes H. de Vreese, Arjen van Dalen and Erik Albæk

A well-functioning democracy needs the news media to provide information to its citizens. It is therefore essential to understand what kinds of news contents contribute to gains in citizens’ political knowledge and for whom this takes place. Extant research is divergent on this matter, especially with respect to ‘softer’ news coverage. This cross-national study investigates the effects of exposure to human interest and conflict frames in the news on political knowledge. Drawing on panel surveys and media content analyses in three countries, the study shows how these two frames contribute positively to political knowledge gain. This relationship is moderated by political interest so that those who are least interested learn the most from this type of easily accessible news coverage. The results are discussed in the light of research on news media and knowledge acquisition.

Introduction

The news media are some of the most important sources of information about politics and therefore a key antecedent of citizens’ political knowledge. Previous literature has demonstrated that political knowledge is a predictor of political involvement (McGraw & Pinney 1990), electoral turnout (Neuman 1986; Delli Carpini & Keeter 1996), and that greater political knowledge leads to higher participation and tolerance for opposing viewpoints (Jerit et al. 2006). In most models of democracy, factual information and news are emphasized as key ingredients (Strömback 2005). Political knowledge is considered the ‘currency of citizenship’, which can be acquired over time and spent on various social goods such as voting, political action, and deliberating with and persuading others (Delli Carpini & Keeter 1996, 8).

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Given the importance of political knowledge for the quality of democracy, we might expect the media’s impact on knowledge to be exhaustively researched. A considerable body of research has yielded important insights. However, much of this is based on either assumptions about actual news media contents or correlational evidence. In this article, actual news content is incorporated into the design and change in political knowledge is investigated. The article focuses on the impact that two of the most widely used news frames – human interest and conflict – have on political knowledge. An argument is developed for why this type of news coverage has a positive effect on knowledge acquisition and why this coverage is especially conducive to learning for those with less political interest. This relationship is tested, drawing on a combination of panel survey data and media content analyses in three countries ensuring variation in the supply and usage of different types of news content.

Learning from the News

Evidence of knowledge gain from exposure to news media dates as far back as the Columbia studies. More than sixty years ago, Lazarsfeld et al. (1944) found little proof of attitude and opinion change driven by media exposure, but they demonstrated that people actually acquire information from mass media. Since then a plethora of studies has focused on the role of news media use in producing political knowledge (e.g., Brians & Wattenberg 1996; Chaffee et al. 1994; McLeod et al. 1996; McLeod & McDonald 1985; Neuman 1986; Neuman et al. 1992; Palmgreen 1979; Robinson & Levy 1986). Based on their review of political communication effects research, McLeod et al. (2009, 231) concluded that ‘special forms of political communication, debates, and conventions, along with standard news coverage, convey discernible if modest amounts of information to their audiences’. Extant research has shown that knowledge gains are the result of the combined influence of three factors: the availability of information, the nature of the medium and individual motivations. Subsequently, we can distinguish between studies that have looked at contextual-supply, medium-bound and individual-motivational explanations.

Looking at the supply side, we know that the political information context matters for the possibility of citizen learning from the news. Prior (2007) demonstrated that the changing mix of news versus entertainment programmes influences levels of knowledge among the American population over time. People may choose entertainment over news if the choice is available. In Europe, however, Wonneberger (2011) showed that citizens may not necessarily shy away from news and current affairs even in a situation of abundant choice.
Other studies have shown that the opportunity for television viewers to encounter news about politics when they watch television, which is a necessary precondition to learning, varies considerably across countries, especially due to presence or absence of a public service broadcasting tradition (Aalberg et al. 2010; Esser et al. 2012). Curran et al. (2009) found that the public service model of broadcasting gives greater attention to public affairs and international news, and thereby fosters greater knowledge in these areas than the market model of broadcasting. The relation between information context and a knowledgeable population was also inherent in the ‘trap effect’ model (Schoenbach & Lauf 2002): when channel choice is limited, there is a greater chance that people stay tuned to the channel they are watching and get ‘trapped’ into (also) watching the news.

In a pioneering study combining survey and content analysis, Iyengar et al. (2010) found that the importance of individual-level motivational factors for knowledge gains varies across contexts. They showed that the opportunity costs of exposure to news are lower in media systems with a strong public service tradition. Because hard news is more widely available here, individual motivation is less important than in information-deprived situations (Iyengar et al. 2010, 292). Jerit et al. (2006) advanced the literature by employing a straightforward but under-utilized approach to study the influence of the information environment on political knowledge. Combining 41 public opinion surveys about different issues with content analyses, they showed that the attention for these issues increases policy-specific knowledge. They were also able to show differences across media types. While the highly educated learn more from newspapers than lower educated individuals, both high and low educated individuals learn from television.

The ability to learn from television versus newspapers has been a second key focus in the literature about political knowledge and the news. We know that both television and newspapers can contribute to political knowledge (e.g., Chaffee et al. 1994; Sotirovic & McLeod 2004). Scholars have found newspaper readers to be more informed than television viewers (Robinson & Davis 1990). This is consistent with Delli Carpini and Keeter’s (1996) findings of positive effects of newspaper reading on political knowledge and no systematic effects for television. Weaver and Drew (2001) have shown that viewers learn from television news, although the effects are weaker than from newspapers. However, for the less informed, television has shown to be beneficial. Based on their study of learning from the mass media, Chaffee and Kanihan (1997, 427) describe television as a ‘bridging medium’. Although newspapers cover national politics more in-depth, television ‘brings news highlights to the less assiduous citizens’. To a large extent, the mixed findings regarding the effects of television versus newspapers on political knowledge seem to be contingent upon factors unrelated to the medium itself.
The different effect on people with different predispositions shows the importance of a third key focus of research into political knowledge gain from news: individual motivation. At the individual level we know that education, existing knowledge and political interest are key predictors for learning from the news (Price & Zaller 1993; Tichenor et al. 1970). Prior knowledge facilitates learning as the more one knows the easier it is to make sense of new information (Norris 2000). People who are already better informed are more likely to be aware of a topic when it appears in the mass media and are better equipped to understand it: Higher interest in and attention to news stories generates knowledge (e.g., Bennett 1998; Chaffee & Schleuder 1986; Chang & Krosnick 2003).

This article bridges the gap between these three different bodies of literature explaining the relationship between news media and political knowledge. It shows the results of a cross-national study ensuring variation in the context and supply side, includes different media and assesses the impact of individual-level motivations. In our understanding of how political news affects political knowledge, much is based on self-reported media exposure measures, which are generally not combined with measures of the news content (see Jerit et al. 2006, 267; Gaziano 1997). Few studies include evidence of actual media content, thereby not enabling researchers to say what it is about media coverage that influences learning (for exceptions, see Barabas & Jerit 2009; Iyengar et al. 2010; De Vreese & Boomgaarden 2006). When explaining the different effects of television and newspapers, differences in reporting style are generally assumed rather than measured explicitly. This article adds to the understanding of knowledge gains from political news by presenting the effects of exposure to characteristics of the actual news content.

The Effects of News Frames on Learning

Differences in learning between different types of outlets are generally explained by the different characteristics of the formats (e.g., Graber 2001). News media can be distinguished by the amount of information they convey (Kleinnijenhuis 1991), the journalistic themes and angles they provide to the news story (see, e.g., Bennett 1998; Gans 1979), or frames they apply (e.g., Rhee 1997). Previous research about the influence of content characteristics has mostly focused on the distinction between hard news and soft news. The dichotomy became especially prominent in studies investigating ‘the softening of news’, ‘tabloidization’ or ‘increasing infotainment’ (Reinemann et al. 2012). Whereas several studies referred to the distinction between soft and hard news (e.g., Esser 1999; Sparks 2000; Uribe & Gunter 2004), there is no consensus in the academic literature on the definition of such terms.
(e.g., Baum 2002; 2003a,b; Patterson 2000). Soft news is often used for describing a whole set of characteristics represented in individual news items including story ambiance (serious versus light-hearted) and sensational presentation (see, e.g., Patterson 2000). Scholars typically describe soft news as more personality-biased, less time-bound and more incident-based than other news, and they ascribe this to its focus on human interest and other entertainment-centred stories. A number of studies have pointed towards the majority of news becoming softer over time (see Reinemann et al. (2012) for a review of concepts, operationalizations and key findings).

While critics have rushed to debate the normative consequences of soft news, empirical assessment of soft news effects are generally quite rare (Prior 2007). Some argue that consuming soft news does not contribute to consequential gains in political knowledge (e.g., Prior 2003; 2005; 2007). On the contrary, several studies found soft news facilitates political learning (e.g., Baum 2003a, b; Brewer & Cao 2006). Moreover, a growing body of scholarly literature examining the implications of entertainment-oriented ‘soft news’ television programmes for democratic politics (see Cao and Brewer (2008) for a review) suggest that political content within political programming is associated with awareness of political issues and at least some forms of knowledge. For example, Xenos and Becker (2009) showed that viewing politically oriented entertainment programming is associated with at least some forms of learning about the political world. Parkin (2010) examined how appearances on late night talk show affects what viewers know about politics and the criteria they use to evaluate the candidates, and found that late night and daytime talk show viewing, in particular, is positively associated with knowledge of some key political issues. Further, Cao and Brewer (2008) challenged the notion that political comedy programmes undermine political participation by showing that exposure to such programmes is positively associated with some forms of political participation.

Baum (2002, 2005) argues that soft news has the potential to expose uninterested citizens to relevant political information, and shows that, in at least some circumstances, it is possible to find factual knowledge-enhancing effects associated with consuming soft news programming – at least among relatively apolitical segments of the public. In this way, citizens may learn from programmes like daytime or late night talk shows as an incidental by-product (see also Young 2004; Brewer & Cao 2006). According to Baum, unengaged individuals who consume soft news are also more attentive to major political events than their counterparts who do not consume soft news. Young and Tisinger (2006, 116) also showed that for those lacking the intrinsic motivation to learn about and become engaged in politics, ‘exposure to soft news will likely increase attentiveness to certain issues . . . contributing to an equalizing effect over time’. Soft news is additionally
found to help the low politically sophisticated to vote consistently (Baum & Jamison 2006).

Although there is empirical support that soft news can be beneficial for inattentive audiences, evidence for knowledge gain is still mixed and seems to depend on the type of knowledge that is measured. Prior (2003, 2007) argues that mere attentiveness or awareness implies a weak standard for assessing learning. He also found little support that a preference of entertainment programmes increases factual knowledge.

What becomes clear from the debate about soft news is that at least some consumers do learn about politics via soft news (see also Moy et al. 2005). In this study we examine this notion by investigating the effects of two prominent soft news frames – conflict and human interest framing (Semetko & Valkenburg 2000) – on political knowledge gain. Frames may refer to ‘the selection, organization and emphasis of certain aspects of reality, to the exclusion of others’ (see De Vreese et al. 2001, 108). We focus in particular on conflict and human interest framing because they represent essential criteria for a news story to make it to the news, they occur frequently in the news and they are also used by newsmakers to entice audiences (see Price 1989; Valkenburg et al. 1999; De Vreese et al. 2001). Human interest and conflict presentations often include a personal angle either by treating politics as a series of discrete conflicts among individual politicians or parties (Bennett 1998), or by adding an individual’s story or an emotional angle to the presentation of an event, issue or problem (Bennett 1996; Valkenburg et al. 1999). These two frames can therefore be used by journalists as tools for ‘softening the news’.

Previous research investigating effects of exposure to human interest and/or conflict frames in the news on knowledge acquisition is both fragmented and mixed in terms of results. Some earlier studies suggested that highly emotional news stories diminish recall in the short term (Mundorf et al. 1990). This is consistent with Valkenburg et al. (1999), who found no effects of exposure to the conflict frame and negative effect of exposure to the human interest frame on readers’ recall of information. Further, conflict framing is conceptually related to horse race coverage (Patterson 1993), which has often been found to negatively affect learning from the news (e.g., Patterson 1980). Graber (1990), Robinson and Levy (1986) and Gunter (1987) have shown that personalized and close-to-home news stories are better recalled.

In line with Baum’s findings about the effects of soft news on political knowledge, the current study theoretically argues that exposure to news containing human interest or conflict elements may increase learning from the news for several reasons. First, news stories combining either or both elements are likely to provoke attention which can ensure longer exposure as well as enhance learning from the news. According to Graber (2001),
attention arousal is considered one of the first steps in acquiring information. Baum (2002, 2003a) also characterizes attentiveness as a precursor to knowledge or understanding, making attention an important element of political learning. Second, prolonged exposure should affect knowledge gain positively given the increase in the presented amount of information. Increasing the information flow, as some studies have noted, can positively affect knowledge acquisition regardless of the frames employed. Third, Graber (2001) showed that people with low news interest and exposure tend to focus more on soft news such as human interest stories, and people who lack interest in politics pay less attention to political stories but more attention to human interest information. In fact, participants in Graber’s study listed relevance and emotional appeal of news stories as primary considerations for preferring one news story over another. Finally, personalization emphasis in the news was found to increase learning in some earlier studies (e.g., Price & Czilli 1996).

The Moderating Influence of Political Interest

Previous studies on news learning suggest a number of factors that condition knowledge gain. A premium has been put on educational status (dating back to the origins of the ‘knowledge gap’ hypothesis – see Tichenor et al. 1970). Most studies show that gaps between high and low educated groups are increased by news coverage (Tichenor et al. 1970; Eveland & Scheufele 1995). The rich get richer because they have a better capacity to process new information. Since we focus on knowledge gain as the outcome variable, we are concerned with motivational factors that might enhance or limit the impact of news frames. Kwak (1999) noted that rather than education, motivational factors may also either drive this effect or moderate the impact of news exposure. We are particularly interested in individual motivational factors in the context of abundant media choice (Prior 2007). As succinctly noted by Prior (2010, 747), political interest is of importance because of ‘the effects of this kind of intrinsic motivation’. Political interest may refer to citizens’ willingness to pay attention to politics at the possible expense of other endeavours (Lupia & Philpot 2005), and is empirically related to political knowledge (Bennett 1995; Marcus & MacKuen 1993; McLeod & Perse 1994), media use (Lazarsfeld et al. 1944; Luskin 1990), political discussion (Bennett et al. 2000; Myers 1994) and news attention (Slater 2004). The variable has also been particularly crucial in explaining political efficacy (Craig et al. 1990). Politically interested people are more knowledgeable about politics, more likely to vote and more likely to participate in politics in other ways (e.g., Delli Carpini and Keeter 1996; Powell 1986; Verba et al. 1995). Important influences on levels of
political interest may include sociodemographic factors, exposure to the media and peer groups, as well as economic development at the country level (Lupia & Philpot 2005; Prior 2005). Recent research has shown that political interest may not simply be the result of socialization, but also part of an individual’s genetically informed disposition (Klemmensen et al. 2012). This may explain the exceptionally high absolute stability in political interest found in previous studies (Prior 2010).

Our study examines how interest in politics moderates the relationship between exposure to conflict and human interest framing and political knowledge. We specifically contend that individuals with low political interest are more susceptible to the effects of exposure to human interest and conflict framing on gaining knowledge. This is likely to be the case since learning from human interest and conflict framing may occur almost unintentionally, happening through increased arousal as suggested by Gruber (2001). In other words, we see learning from conflict and human interest framing as an unintended byproduct rather than an intentional activity, so it is not so much those people with the highest degree of motivation, but rather those with lowest motivation who will benefit most in relative terms.

This expectation is also advanced on the basis of Iyengar et al. (2010, 305) who showed that low opportunity costs of news exposure is especially beneficial for people with low motivation since this type of information does not require them to ‘invest great effort to acquire information about current issues’. Likewise, Schoenbach and Lauf (2002) demonstrated that those not really interesting in politics gain the most from exposure to television news. This argument is akin to Baum and Jamison (2006), who also corroborate Liu and Eveland’s (2005) contention that the relationship between watching television and political knowledge is strongest for people with low interest. Their empirical analysis showed support for the hypothesis that the attention-grabbing style of television is particularly beneficial for those who have low motivation to follow the news. Jerit et al. (2006) offer a similar argument to explain why newspapers increase the knowledge gap between low and high educated groups, while television does not. In relative terms, low educated groups even learn more from television. They also relate this to the type of content on television which can easily be comprehended and is attractive to these audiences. Therefore, they learn from the news as an unintended byproduct. Even though learning is ‘largely passive and unintentional...individuals may obtain enough information to function as monitorial citizens’ (Jerit et al. 2006, 278).

Hypotheses

Based on the above, two specific hypotheses can be developed concerning the dynamics of the relationship between news exposure and political
knowledge. The primary contribution is to link the effects of news exposure to differences in content (see Slater (2004) for a discussion). First, the study focuses on the effects of exposure to conflict and human interest news frames on political knowledge gain.

**H1**: Exposure to conflict and human interest frames in the news increases knowledge gain.

Next, the study investigates the moderating function of political interest vis-à-vis the first hypothesis. It is expected that individuals with low political interest are more susceptible to the knowledge effects of exposure to conflict and human interest news frames.

**H2**: Political interest moderates the relationship between exposure to conflict and human interest frames in the news and political knowledge gain so that knowledge attainment is highest among people with lower levels of political interest.

**Method**

This study draws on two primary data sources and incorporates a cross-national design: a two-wave panel survey that includes a battery of media exposure and attention measures to various national media outlets; and a content analysis of all media outlets included in the survey in the period between the two panel waves. The inclusion of several news outlets and the cross-national design ensures variation in the use of conflict and human interest frames as well as in the levels of political knowledge. Using panel surveys does not involve forced exposure, and so they provide a realistic setting for investigating the effects of media use on news learning (Kinder 2007). The study is conducted in the context of the 2008 American presidential elections. This issue is more comparable across contexts than domestic issues, where responses can be biased by multiple idiosyncrasies (see Holz-Bacha & Norris 2001), thus enhancing equivalence of knowledge responses across the sampled countries and avoiding items bias (Wirth & Kolb 2004). The panel survey was fielded around the end of the campaign and includes a pre- and post-election wave with a representative sample of the populations. The content analysis is the cornerstone for establishing the link between the way the elections are covered and knowledge gain about these elections. It is designed to tap visibility and framing of stories about the American election. This serves the underlying assumption that changes in levels of knowledge gain between both waves are, at least partially, a function of content-related differences.

To increase variation in the level and type of news coverage, panel data were collected and content analysis conducted in three countries: Denmark,
the United Kingdom and Spain. These countries represent three media systems as classified by Hallin and Mancini (2004), and differ on media market structure, professional ideology among journalists, the role of the state and political parallelism. The most relevant assumption of this typology is that structural differences between media systems matter for the nature of political news reporting. It is generally encouraged to pursue research on political knowledge comparatively to cover contexts with different flows of information (Zaller 1996). The focus of this study is to examine the effects of news media use on knowledge gain dynamics rather than to explain the different levels of knowledge between the three countries. In other words, we are first and foremost interested in the effects of content features (news frames) and individual motivations (political interest) on knowledge gains.

Panel Survey

The panel surveys, including a representative sample of the Spanish, Danish and British populations, were fielded about three weeks prior to and immediately after the elections. Both interview waves were conducted via online panel surveys. The questionnaire length was about 15 minutes for each wave. To reduce potential bias, questionnaire scripting and layout were standardized, and invitations did not include the survey topic as people with particular interest in the topic would be more willing to participate than those who do not have strong feelings about politics. The source questionnaire was first scripted and finalized in English and then translated to Danish and Spanish. A strict translation procedure was applied, including proofreading and back-translation of fieldwork versions by experts operating as independent third parties. This procedure is essential for reliability in multilingual surveys in cross-national comparative research (see Werner & Campbell 1970; Van de Vijver & Tanzer 1997). The response rates in Denmark were 75 percent in wave I and 68 percent in wave II; in the United Kingdom 63 percent in wave I and 74 percent in wave II; and in Spain 75 percent in both waves I and II. A net sample of 1,539 respondents in Denmark, 1,571 respondents in the United Kingdom and 1,642 respondents in Spain participated in both waves. Respondents who did not participate in both ways were excluded in order to assure a balanced panel regardless of attrition between the panel waves.

The dependent variable in this study is political knowledge about the American presidential campaign and electoral system. Such knowledge is expected to mainly come from news media because it is a foreign issue for citizens living outside the United States. Therefore, the issue is suitable for comparative research examining media effects triggered by exposure to news content in different countries. One of the problems of comparative
research is that it is difficult to find comparative questions that are equally difficult or easy. By focusing on one international event, this article applies an inventive solution to that problem (see also Iyengar et al. 2010). Knowledge was assessed through the following four statements, with the choice of responses being ‘true’, ‘false’ or ‘don’t know’: ‘John McCain ran in the 2008 US Presidential election for the Republican Party’, ‘The US President is elected to serve a term of two years’, ‘American citizens elect the US President directly’ and ‘Party members who run for US Presidency are internally elected through their parties’. Answers were recoded into dichotomous categories ‘1’ (correct) or ‘0’ (incorrect or ‘don’t know’) (Luskin & Bullock 2005). The answers were combined into one knowledge scale. The time respondents used to answer knowledge questions was further measured and showed no odd response time patterns. To test for possible sensitization effects in the panel, a fresh sample of around 200 respondents in all three countries answered the same knowledge questions in wave II. The mean knowledge scores for the new sample did not differ significantly from the mean scores for respondents taking part in both panel waves.

We relied on media exposure measures to predict (change in) knowledge. Respondents were asked to report how many days a week they use the following public and private news broadcasts: BBC News at 22:00 and ITV Nightly News in the United Kingdom; DR1 TV-Avisen at 21:00 and TV2 Nyhederne at 19:00 in Denmark; TVE Telediario2, Antena3 Noticias and Informativos Telecinco in Spain, and the following broadsheet and tabloid newspapers: The Guardian, Daily Telegraph and The Sun in the United Kingdom; Politiken, Jyllands Posten and Ekstra Bladet in Denmark; and ABC, El Pais and El Mundo in Spain.

To establish the effect of exposure to news conflict and human interest frames between the two panel waves, we controlled for interpersonal discussion regarding the American election during the last three weeks of the election campaign. Interpersonal communication is associated with political knowledge (e.g., Bennett et al. 2000; Delli Carpini & Keeter 1996), and is considered a conduit for gaining second-hand information from the news as well as a key antecedent for knowledge gain and political participation (Scheufele 2002). Furthermore, we controlled for political interest and used it as a moderator of the relationships under investigation (modeled as an interaction effect). We also controlled for country effects as our sample comes from three different populations. Finally, we included the lagged term of ‘political knowledge’ in wave I of the survey. This allows us to account for prior levels of knowledge (Price & Zaller 1993) and to examine change between the panel waves (Markus 1979). The Appendix lists descriptives and specific wordings for the independent variables.
**Content Analysis**

We are interested in the visibility of the 2008 American election coverage as well as the presence of conflict and human framing in news stories about the topic. To assess the visibility of the election news stories, we collected and analyzed the national broadcasts and newspaper issues for all mentioned outlets in the period between the panel waves. The television unit of analysis is the whole broadcast (172 news shows in total), and the newspaper unit of analysis includes the front page and one randomly selected page (440 pages in total). Proportional amount (newspapers and television) and length (television) of American election coverage are used to assess visibility.

We assessed the presence of human interest and conflict framing using established measures (Semetko & Valkenburg 2000). We looked at all news items in the major and relevant sections of the collected newspaper and broadcasts. The single news item is the unit of analysis here. A total of 3,994 television and newspaper news items were analyzed to identify relevant types of news stories about the American election for thorough analysis of styles presence. A total of 595 news articles and 272 television news stories about the election were identified. The coding was conducted by twelve coders who are either native or fluent in the languages of the three countries. The Holsti indicator for inter-coder reliability ranged from 0.69 to 1.00 for the different indicators in the different outlets. To assess the influence of exposure to conflict and human interest framing on knowledge gain, we incorporated the results of the content analysis directly into the exposure measure used in our change models so that individual respondents are assigned separate weighted scores determined by their frequency of exposure to the different news outlets in their countries as well as the average presence of these news frames in each news outlet during the period between the panel waves. In addition, we added attention to the measure. To avoid effects that are exaggerated due to an unevenly high weight for attention (Slater 2004; Eveland et al. 2009), we created our exposure measure by weighting the use of each outlet by the presence of attention-inducing content and adding the attention paid to the American election (see, e.g., Schuck & de Vreese 2008). The weight for each outlet was calculated by summing the share of news items about the American elections, the share of conflict framing and the share of human interest framing in the specific outlet.

**Results**

We first take a look at the findings from the content analysis to identify the visibility and framing of the American elections in the different outlets in...
the three countries. Figure 1 shows that the visibility of the elections (amount) is higher for public service than for commercial television in both Denmark and the United Kingdom, and the picture is the opposite in Spain with TVE lagging about 2 percent behind Informativos and Antena3. As for newspapers, differences in topic visibility are found between tabloids and broadsheets in Denmark and the United Kingdom as well as among broadsheets in all countries. Election news stories were not visible in *Ekstra Bladet* and were hardly visible (3 percent) in *The Sun*. Otherwise, election coverage was more noticeable in *The Guardian* (10 percent) and *Jyllands Posten* (11 percent) than in *Politiken* and the *Daily Telegraph* (7 and 6 percent, respectively). *El Mundo* also had less visible coverage of the election than *ABC* and *El Pais*.

Looking at the presence of conflict and human interest framing (Figure 2), we find that commercial television coverage is less focused on conflict and human interest reporting in Denmark (26 percent, on average) and Spain (22 percent, on average) than public service broadcasts (31 percent, on average per country). The BBC has more conflict-driven and less human interest coverage than ITV. As for newspapers, the Danish tabloid has less conflict news than the two broadsheets, and it does not focus on human interest reporting at all. The tabloid versus broadsheet distinction pattern for newspapers holds in the United Kingdom, with *The Sun* focusing...
less on human interest coverage than the Daily Telegraph or The Guardian. Conversely, both the Daily Telegraph and The Sun have equal shares of conflict-driven coverage, though for the latter this accounts for only 17 stories compared to 53 stories in the Daily Telegraph. Conflict coverage is far more present among British and Danish than among Spanish broadsheets. In Spain, ABC differs from El Pais and El Mundo in that it focuses least on conflict and human interest coverage during the last three weeks of the campaign. The content analysis does not show large cross-national differences in the attention devoted to the elections. It shows that conflict framing is more prominent than human interest framing, but in terms of frames, the three countries all offer the opportunity to be exposed to these frames and we thus proceed with the analysis in a pooled fashion, assessing the impact of this exposure across the different contexts.

To test the hypotheses about the effects of conflict and human interest framing on political knowledge gain and the moderating function of political interest, we turn to the models of change which build on the analysis of our two-wave panel survey (see Table 1). After controlling for initial levels of political knowledge, interpersonal discussion and country differences, we find that exposure to conflict and human interest framing is a positive predictor for political knowledge (Table 1, model 1). This supports the first hypothesis. After including political interest in the model, exposure to
Table 1. Predicting Change in Knowledge

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<td>0.001</td>
<td>-0.103***</td>
</tr>
<tr>
<td>Knowledge (t1)</td>
<td>0.502</td>
<td>0.012</td>
<td>0.519***</td>
<td>0.477</td>
<td>0.012</td>
<td>0.494***</td>
<td>0.475</td>
<td>0.012</td>
<td>0.491***</td>
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<tr>
<td>Constant</td>
<td>1.102</td>
<td>0.055</td>
<td>0.357</td>
<td>0.920</td>
<td>0.059</td>
<td>0.365</td>
<td>0.758</td>
<td>0.091</td>
<td>0.365</td>
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<tr>
<td>N</td>
<td></td>
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Notes: OLS regressions. Entries are unstandardized coefficients, standard errors and betas. ***p < 0.001 (two-sided tests).
conflict and human interest framing has a smaller effect on political knowledge change (see model 2). The differences in coefficient significance from model 1 to model 2 suggest that the impact of frames exposure on political knowledge can be mediated by political interest.

The final model shows a significant interaction between low political interest and exposure to conflict and human interest framing (model 3). This supports the second hypothesis: the relation between exposure to conflict and human interest framing and political knowledge gains is moderated by political interest. Exposure to these news frames is indeed most beneficial to those who have low political interest. Finally, the effects of exposure to the news frames on dynamics of political knowledge are not significantly moderated by country dummies. These effects thus hold irrespective of context.

Figure 3 further visualizes the moderating effect of political interest. The effect of exposure to conflict and human interest framing is shown for respondents with different levels of political interest. The graph shows that the effect of weighted exposure is largest for people with lowest political interest.

Figure 3. Marginal Effect of Exposure to Conflict and Human Interest Frames on Political Knowledge.

Notes: Graph shows that effect of weighted exposure is largest for people with lowest political interest and declines when political interest increases. For the people with highest political interest (scoring 5 or higher), there is no significant effect.
interest and declines when political interest increases. For people with higher levels of political interest (scoring 5 or higher), there is no significant effect.\textsuperscript{17}

**Discussion**

Most models of democracy stress the importance of a somewhat knowledgeable and informed citizenry. The role of the media in contributing to this knowledge is the object of much research, and extant studies have produced mixed findings. This study investigated the effects of news media in *change in political knowledge*, set in the context of the 2008 American presidential election, and carried out in three countries, using two-wave panel surveys and a media content analysis. It focused especially on the impact of exposure to conflict and human interest news frames and found these to be conducive to learning from the news. This effect was particularly strong for those who were least motivated and less interested in politics, suggesting that this kind of news reporting has the potential to inform individuals who might otherwise pay little attention to politics.

The design was aimed at looking at the supply of political information framed in terms of conflict and human interest, on the one hand, and at individual motivational factors, on the other. The content analysis showed that the elections were generally more visible in public service broadcasts and in broadsheet newspapers. These findings corroborate Iyengar et al. (2010), who found public broadcasting and broadsheet newspapers include more hard news than their commercial and tabloid counterparts. There were some differences also in the degree of the use of the conflict and human interest frames, but, *ceteris paribus*, the content analysis revealed quite some cross-national similarity in the degree of framing. The conflict frame was most frequently used, which dovetails the findings of the cross-national analysis of political news framing by De Vreese et al. (2001).

The key interest in this study was to assess the effects of these news frames on learning. Using the panel design, the study found a *positive effect* of exposure to the news frames on knowledge gains (see also Baum & Jamison 2006). Human interest and conflict reporting styles are often associated with soft journalism. They are a way of ensuring that complex issues can reach the public, often drawing on entertaining elements (see Van Dijk 1988). This analysis does not support previous research showing a negative effect of the human interest frame on readers’ recall of information from the news (e.g., Valkenburg et al. 1999). However, the previous study only found this effect for the issue of crime and not for the issue of the European economy. The positive finding of the human interest frame can be interpreted as a function of making political news accessible using a human example (see also Iyengar 1991). No study so far has related the conflict
frame to gains in political knowledge. We do know, however, that a conflict frame is enticing, can foster consideration of more sides of an issue and boost political participation (De Vreese & Tobiasen 2007). In addition, a conflict frame is also conducive for political learning, especially for those less interested in politics. Future (experimental) research should further disentangle what elements of the conflict and human interest frames are most effective *vis-à-vis* political knowledge gain.

The moderating effect of political interest is an important finding in this study. The fact that those with lower levels of political interest gained most political knowledge is noteworthy. This finding is in line with evidence from previous studies showing individuals with low interest in politics to be more susceptible to the influence of news framing (e.g., Iyengar & Kinder 1987; Valentino et al. 2001). The finding also incorporates previous ones about soft news being of most value to politically inattentive audiences (see, e.g., Moy et al. 2005; Baum 2002; 2005; Baum & Jamison 2006; Young & Tisinger 2006). More specifically, it suggests that journalistic news frames like conflict and human interest, which are sometimes argued to have negative effects on political knowledge as they may distract readers or viewers from facts, can be effective for learning from the news – particularly for the less interested segments of the population. Political interest also appears to mediate the effects of frames exposure on the dynamics of political knowledge. This suggests that political interest may not only moderate the impact of news exposure, but also drive it (see, e.g., Kwak 1999). Moreover, interpersonal communication was found to be a significant predictor of knowledge gain in all models. This echoes previous findings showing that people who talk about politics more frequently tend to display higher levels of political factual knowledge and political participation (see Scheufele 2000).

The theoretical overview distinguished between supply and motivational factors affecting the learning process. This *supply of content* is important for knowledge gains, and in particular for those who might be less motivated. In fact, such content can help closing the gap between the interested person and the non-interested person when they turn to the news. From a theoretical perspective, this research points to the importance of considering information supply not only as the availability of news and current affairs programmes, but also as the presence of political information framed in accessible ways (see also Iyengar et al. 2010). As shown in the findings, the relationships between frames exposure, political knowledge and political interest hold irrespective of the information environment, which highlights the importance of framing and motivational factors in determining knowledge acquisition.

Given the nature of this study, it was not able to, at the individual level, assess the response to each news story. While it theorizes that the effects have to do with the accessibility of the frames and the identification and
arousal as a result of the two frames, future experimental research should substantiate these theoretical expectations beyond what is done here.

The study comes with a number of additional limitations. One is the degree of explained variance. Even in a comprehensive panel design controlling for initial levels of knowledge, a significant amount of variance remains unexplained. Future research needs to further identify factors leading to knowledge gains. More attention is also needed to the concept and measurement of political knowledge. Multiple choice examination-style measures are questioned for their broader relevance. The choice of this measure over open-ended questions (e.g., Graber 2001) or recognition questions (e.g., Valentino et al. 2001) was triggered by interest in the relationship between framing and political knowledge dynamics. Future research might also pay more attention to the fact that citizens’ failure to recall particular items of information does not necessarily mean that they have not learnt anything. They may forget the detail, but they may nevertheless have grasped the meaning (see Graber 2001). Finally, the operationalization of knowledge was confined to a limited number of knowledge questions. This is mainly for practical reasons regarding the length and cost of the panel survey. Future studies may seek to operationalize political knowledge using a larger number of questions that also differ more between types of political knowledge. This will enhance the measurement quality and emphasize the theoretical relevant distinction. It might also give more analytical leverage. The knowledge measures in this study had some issues of ceiling effects especially in Denmark (see also Curran et al. 2009) where the time I level of knowledge was so high that it was hard to increase much in knowledge.

Despite these shortcomings and recommendations for future research this study has demonstrated the positive learning effects of exposure to conflict and human interest frames in the news, especially for those lacking political interest. This finding is important both for democracy at large and for framing and learning theory in particular, and provides an important antidote to the often pessimistic conclusions about citizens’ ability to learn from soft news.

ACKNOWLEDGEMENTS
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NOTES
1. The first wave of the survey took place 10–20 October 2008 and the second wave 7–14 November 2008. The general population targeted was 18–65 years old. A quota system was used in the United Kingdom and Spain to ensure a well-distributed sample in terms of gender, age, level of education and level of urbanization. This was not needed
in Denmark because the Danish panel generated samples that are demographically well distributed. The panel surveys were conducted by TNS Opinion (http://www.tns-opinion.com/home/).

2. An additive knowledge scale was formed ranging from 0 to 4 (w1 KR20 = 0.56, w2 KR20 = 0.57). Mean values: Denmark w I (M = 2.79, SD = 1.11), w II (M = 2.98, SD = 1.02); United Kingdom w I (M = 2.24, SD = 1.16), w II (M = 2.36, SD = 1.27); Spain w I (M = 2.38, SD = 1.22), w II (M = 2.53, SD = 1.14).

3. In all three countries, more than 90 percent of the respondents answered all questions in 90 seconds and more than 95 percent answered the questions in about two minutes. Including or excluding the remaining 5 percent does not alter the results.

4. Including country dummies serves as a comparative control. The system level is not suggested to affect the relationship between exposure and political knowledge. The same goes for the type of medium (television versus newspapers) and coverage type (public service television versus commercial television and broadsheet newspapers versus tabloid newspapers).

5. The content analysis was conducted between 10 October and 4 November for Denmark and England, and between 13 October and 4 November for Spain since the first wave of the panel survey was fielded on 13 October there. The following newspaper issues (The Sun, 2 November; Daily Telegraph, 2 and 3 November; ABC, 28 October; and El Mundo, 2 November) and news shows (ITV, 29 October and 2 November; BBC, 3 and 4 November) are missing.

6. The human interest indicator is measured by the following item: Does the article/story provide a human example or human face to the story in order to illuminate developments in politics or society? (1 = yes, 0 = no). The conflict indicator is measured by the following item: Does the story mention/portray that one person, group, institution or organization reproaches/blames/criticizes another? Or presents quotes or paraphrases in which an actor criticizes or refutes claims of another actor? (1 = yes, 0 = no).

7. Special sections focusing on irrelevant topics were not analyzed (e.g., sports and advertisement sections).

8. Each article in a newspaper is a news item (weather forecasts, advertisements, subscripts under pictures, single quotes, single headlines, jokes/caricatures are not considered to be news items). New headlines in the text of an article do not constitute a news article. Each item in a broadcast is a news item (weather forecasts, commercials, summaries, headlines, sports, announcement of other programmes are not considered to be news items). A news item is defined by its topic. Each change of topic should be regarded as a new news item.

9. The following types of news items were excluded from the analysis: columns, commentary or opinion pieces, editorials, interviews, documentations, features, political sketches. The following types of news items were considered for the analysis: news stories, bullets, reportages, background/analysis stories, sketches, news readers, brief and longer reports, live reports.

10. The inter-coder reliability test was performed using a random sample of 201 news items. (The news items were collected from three different newspaper issues from each country, three news shows per outlet from Denmark and the United Kingdom, and two news shows per outlet in Spain.) Holsti scores range from 0.69 to 1.00 for the different indicators. Cohen’s Kappa scores range from 0.40 to 1.00, except for the human interest indicator on Danish television (0.16, corresponding to 0.69 using Holsti’s method) and the conflict indicator on British television (0.38, corresponding to 0.73 using Holsti’s method). The Kappa score is sensitive to the number of cases and most Kappa scores are above 0.60, which is considered solid. Krippendorff’s alpha’s scores were also calculated using Hayes and Krippendorff (2007) and showed the same results. As our exposure measures include both conflict and human interest items for both television and newspapers in each country, the low Kappa scores for these two items are not likely to affect the overall individual exposure score (especially as Holsti’s scores are also relatively high). Holsti’s method of agreement has been used in several cross-national content analyses studies such as Strømbäck and Dimitrova (2006) for Sweden and the
The results are substantively the same without the inclusion of attention in the measure.

The calculation is done as follows: Nr of days using medium1 * (visibility of American election topic based on the share of American election stories in medium 1 (see Figure 1) + conflict framing in American election stories in m1 + human interest framing in American election stories in m1) + Nr of days using medium2 * (visibility in m2 + conflict framing in m2 + human interest in m2 + ...) + attention about American election in the period between the two panel waves (see Appendix).

The effects of news exposure per se on dynamics of political knowledge were tested and found to be not significant. If the influence of exposure to conflict and exposure to human interest framing are presented separately in the same model, they result in multicollinearity because of repeated exposure frequency. Therefore, we combine exposure to conflict and human interest framing in one weighted exposure measure. Testing the effects of these two frames in separate models on change of political knowledge showed substantially similar results.

Including age, education and gender as controls in the final model does not change these results.

Controlling education in our models (1, 2, and 3) does not affect the results. We conducted further tests to explicate the role of education in change in knowledge about the American elections. Education appeared to be a significant positive predictor of knowledge change, but there is no interaction effect between education and frames exposure on knowledge change.

This finding is also confirmed using a count model (Poisson regression).

This also can be shown using the Johnson-Neyman technique, which mathematically derives the point or points along the continuum of the moderator where the effect of the focal predictor transitions between statistically significant and nonsignificant (see Hayes and Matthes (2009) for a discussion). This method identified 4.56 on the political interest scale (1–7) as a point of transition between a statistically significant and a statistically nonsignificant effect. This means that for political interest values equal to or less than 4.56 down to the minimum value of interest observed in the data (e.g., 1, 2, 3, 4), the effect of weighted exposure on knowledge is positive and significant. Above this point on the scale (e.g., 5, 6, 7) the effect of weighted exposure on knowledge is not statistically different from zero.

Appendix. Overview of Independent Variables

Gender: Female = 1; Male = 0.

Age in years.

Education was recoded into four categories, comparable across the three countries, ranging from 1 (primary school), 2 (high school or equivalent [about 13 years’ training]), 3 (BA or three years of vocational training or equivalent [16 years]) and 4 (masters or postgraduate training [19+ years]).

Political interest was measured using a seven-point scale ranging from 1 (not interested at all) to 7 (very interested). Question wording: How interested or not are you in politics? Denmark (M = 4.96, SD = 1.46); United Kingdom (M = 4.30, SD = 1.65); Spain (M = 4.36, SD = 1.68).
Interpersonal discussion of the American election was measured using a seven-point scale ranging from 1 (never) to 7 (very often). Question wording: How often did you discuss the American elections in the last three weeks? Denmark (M = 5.01, SD = 1.68); United Kingdom (M = 4.33, SD = 1.87); Spain (M = 4.69, SD = 1.69).

Unweighted media exposure (outlet level) consisted of the number of days (per week) using each news outlet for getting the news, ranging from 0 (none) to 7 (seven days). Denmark (DR1 M = 3.23, SD = 2.32; TV2 M = 4.00, SD = 2.4; Politiken M = 0.91, SD = 2.00; Jyllands Posten M = 0.78, SD = 1.81; Ekstra Bladet M = 0.78, SD = 1.76); United Kingdom (BBC M = 2.44, SD = 2.32; ITV M = 1.33, SD = 1.94; The Guardian M = 0.46, SD = 1.28; Daily Telegraph M = 0.55, SD = 1.54; The Sun M = 0.66, SD = 1.65); Spain (TVE M = 2.21, SD = 2.30; Antena3 M = 3.00, SD = 2.47; Informativos M = 2.72, SD = 2.37; ABC M = 0.66, SD = 1.56; El Pais M = 1.28, SD = 2.07; El Mundo M = 1.20, SD = 2.08).

Weighted news exposure: Denmark (M =11.32, SD= 3.99); United Kingdom (M = 9.83, SD = 5.32); Spain (M = 11.18, SD = 4.75). Countries combined (M = 10.78, SD = 4.77).

Attention to American election coverage: A seven-point scale ranging from 1 (never) to 7 (very often). Denmark (M = 5.4, SD = 1.53); Britain (M = 4.58, SD = 1.76); Spain (M = 4.71, SD = 1.65).

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