

# Cross-National versus Individual-Level Differences in Political Information: A Media Systems Perspective

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**ABSTRACT** *We propose a context-dependent approach to the study of political information. Combining a content analysis of broadcast news with a national survey measuring public awareness of various events, issues, and individuals in the news, we show that properties of national media systems influence both the supply of news and citizens' awareness of events in the news. Public service-oriented media systems deliver hard news more frequently than market-based systems. It follows that for citizens living under public service regimes, the opportunity costs of exposure to hard news are significantly lowered. Lowered costs allow less interested citizens to acquire political knowledge. Our analyses demonstrate that the knowledge gap between the more and less interested is widest in the US and smallest in Scandinavia.*

As Walter Lippmann (1922) pointed out in his classic account of public opinion, politics is inherently a mediated experience. Indeed, issues and events not covered by the media fail to enter into the political consciousness. Yet, despite the indispensable role of the news media as “windows on the world”, most scholarship on political information has focused on individual-level explanations (Bennett, 2006; Delli Carpini & Keeter, 1996; Luskin, 1987).

Conventional theories of political knowledge have relied on individual attributes (such as educational attainment) as the principal causal variable across a broad spectrum of awareness ranging from textbook knowledge of civics to familiarity with current events and issues (see Schudson, 1998). Thus, the standard predictors of political knowledge – no matter how the concept is defined – have been political interest, media attentiveness, education and other equivalent indicators of political motivation (Price & Zaller, 1993). Few scholars have attempted to investigate whether or how contextual forces influence individual-level political information,

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notwithstanding the obvious relevance of these forces to what individuals can know about current affairs.<sup>1</sup>

We propose an alternative, more context-dependent approach to the study of political information. More specifically, we suggest that the importance of individual-level motivational factors varies across contexts; they are less important in information-rich environments, but critical in information-deprived situations.<sup>2</sup> When news coverage is informative and frequently encountered, even less attentive citizens become informed. But when the media environment is relatively barren of political content, or when there is an abundance of entertainment programs that compete with news, the acquisition of information becomes challenging and is limited to individuals who self-select into the news audience (Prior, 2003, 2005). Thus, the prevailing level of information is affected jointly by both demand and supply variables so that in an information-rich environment, the information gap between the most and least motivated will be reduced.

### **National Media Systems as Relevant Information Contexts**

Communications scholars have documented systematic variations in the ownership, regulation, and reach of news organizations across the world (for instance, see Blumler & Gurevitch, 1995; Hallin & Mancini, 2004). The most basic difference is between market-based and public service-oriented systems. Market-based systems are characterized by private ownership of major news organizations and minimal regulation of the media. Public service systems feature public ownership and significant regulation of broadcast media. These defining properties of national media systems have important implications for the supply and content of news, especially broadcast news.

In countries with primarily privately owned media, news programming follows the dictates of the market. In the case of television networks, news programming airs infrequently and tends to be more entertainment-centered.<sup>3</sup> However, in countries that actively support public broadcasting and impose programming requirements on both public and private broadcasters, news content is less “soft” and television viewers have more opportunities to encounter news programming. In short, one fundamental difference between market-based and public service-oriented media systems is that the latter are more apt to deliver hard news.

Market and public service media systems also differ in the attention devoted to international news. Market-based systems have gradually increased their ratio of domestic to international news (Moisy, 1996; Norris, 1996) as individual news organizations have been forced to scale back on their overseas presences. The major television networks in the United States, for instance, now maintain only a handful of overseas bureaus (Iyengar & McGrady, 2007). Public broadcasting systems, by contrast, have maintained an active presence across the globe.

Finally, and most importantly, market and public service-based systems differ in the frequency of opportunities to be exposed to news programming. Public service

regimes typically deliver multiple daily news broadcasts during the peak hours of the broadcast day. The major television channels in Finland and Denmark transmit their main news programs at multiple time slots between 6 pm and 10 pm. Britain's top three television channels aired news broadcasts at 6 pm, 6.30 pm, 7 pm, 10 pm and 10.30 pm in 2007.<sup>4</sup> In contrast, market systems offer fewer news broadcasts, typically one or two programs per day. The three American television networks, for instance, transmit their respective national newscasts in the early evening and reserve prime time hours for entertainment programs.<sup>5</sup>

The fact that television news programs in public service systems air more frequently – and are often delivered adjacent to popular entertainment programs such as sporting events – means that *exposure to news is less dependent on individuals' level of interest or motivation*. In effect, the airing of news programs during prime time significantly increases the “inadvertent” audience for news – individuals who encounter news reports while seeking to be entertained.<sup>6</sup> The widening of the news audience, as noted below, has important implications for the distribution of political information across levels of political motivation.

Based on the contrasting attributes of market-based and public service national media systems, we derive three specific predictions concerning cross-national differences in broadcast news programming and associated differences in the level of public knowledge. First, we anticipate that citizens in countries with strong market-based media will be relatively less informed about hard news subject matter (i.e. the identity of public officials and matters of public policy), but more informed about soft news (i.e. sporting events, the behavior of celebrities, etc). Second, we hypothesize the presence of a similar knowledge gap between domestic and international affairs; news coverage typically focuses on domestic subject matter and citizens in all nations will therefore know more about domestic vis-à-vis overseas events and issues. However, given the greater frequency of news programming in public service systems, we expect that knowledge of international affairs will be significantly lower in market-based media systems.

Finally, our third expectation concerns the variable role of individual-level political motivation as a determinant of knowledge. Specifically, we argue that the standard definition of the knowledge gap as the difference in knowledge between more and less motivated citizens will be magnified in market-based systems because the less motivated find it easier to avoid exposure to news altogether.<sup>7</sup> The narrowing of this particular knowledge gap will be most visible for hard news and international news knowledge.

## **Research Design**

In order to investigate cross-national differences in the three different knowledge gaps described above, we coupled a content analysis of broadcast news sources with a survey measuring public awareness of various events, issues, and individuals in the news. This methodology was applied to four different nations – the US, UK, Denmark, and Finland.

*The Four-Nation Sample*

The market-based and public service categories represent ideal types. Most national media systems fall somewhere in between. We capture this variation by focusing on four economically advanced liberal democracies that represent three distinct locations in the space defined along the market versus public service continuum. Denmark and Finland are closest to a relatively pure public service model in which the programming and regulatory principles of public service still dominate. At the other extreme, the US exemplifies a pure market-based regime. In between these extremes, Britain represents a hybrid media system that combines increasingly deregulated commercial media with strong public service broadcasting. This sample is sufficiently diverse on the key attributes of media systems to allow us to investigate whether these systemic variations give rise to different kinds of reporting and patterns of public knowledge.

The American model is based on market forces with minimal state regulation. American media are overwhelmingly in private hands, its public television network (PBS) is under-funded and achieves a trivial audience share (Iyengar & McGrady, 2007). Since the 1980s, commercial broadcasting has been almost entirely deregulated, meaning that American news organizations are essentially entrepreneurial actors which strive to maximize profit.

Yet, running counter to the power of market forces, American journalism reflects a “social responsibility” tradition. News coverage is expected to inform the public by providing objective reporting on current issues. In recent years, however, the rise of satellite and cable television and web-based journalism has weakened social responsibility norms. Increased competition resulted in smaller market shares for mainstream news organizations and led to significant budget cuts. As noted above, one consequence was the closure of foreign news bureaus (Shanor, 2003) and a sharp reduction in foreign news coverage during the post-Cold War era (Emery, 1989; Norris, 1996; Schudson & Tift, 2005). News organizations increasingly turned to soft journalism, exemplified by the rise of local television news that focuses on crime, calamities and celebrities (Iyengar & McGrady, 2007).

In sum, although the American market model is more nuanced than it appears at first glance, intensified competition over the past two decades have compelled news organizations to respond to audience demand. We fully expect that the ratio of hard to soft news will be significantly lower in US broadcast news, with obvious consequences for the level of political information.

In stark contrast to the US system, the traditional public service model – exemplified by Finland and Denmark – deliberately seeks to influence audience behaviour through a framework of public law and subsidy (Lund, 2007). The guiding idea is that citizens cannot be counted on to seek out information on their own and must be repeatedly exposed to public affairs programming if they are to cast informed votes, hold government to account, and be properly empowered. This “guardianship” argument is the basis for the generous subsidies provided public broadcasters, which helps to ensure that they secure large audiences. In Finland, the

two main public television channels had a 44% share of viewing time in 2005 (Sauri, 2006); in Denmark, their equivalents had an even higher share of 64% in 2006 (TNS/Gallup, 2007).

The public interest argument is further invoked to justify the requirement that major commercial broadcasters also offer programming that informs the electorate. The requirement is enforced by independent regulatory agencies. The public service model thus embraces *both* the public and commercial broadcast sectors. In this respect, we anticipate that the most regulated systems (Denmark and Finland) will be characterized by the highest level of hard news content.

Britain represents a media system somewhere in between the pure market (US) and public service (Denmark and Finland) models. On the one hand, Britain's flagship broadcasting organisation, the BBC, is the largest, best resourced public broadcaster in the world, and retains a large audience. The BBC's two principal channels, along with publicly owned Channel 4, accounted for 43% of viewing time in Britain in 2006 (BARB, No date). On the other hand, the principal satellite broadcaster, BSkyB, was allowed to develop in a largely unregulated form, and the principal terrestrial commercial channel, ITV, was sold in a public auction during the 1990s, and its public obligations – though still significant – were lightened. This move towards the deregulation of commercial television had major consequences, only some of which are now becoming apparent. Between 1988 and 1998, the foreign coverage in ITV's current affairs programs was cut in half (Bennett & Seymour, 1999). This had a spill-over effect on other commercial broadcasters, most notably Channel 4 whose foreign coverage in 2005 was almost a third less than in 2001 (Seymour & Barnett, 2006), but also on the BBC where there was a softening of news values.

Overall, even though the market model has been making inroads across the world and the media systems of the four countries are less distinct now than they once were, there remain significant cross-national differences. The American broadcast model is geared primarily towards satisfying consumer demand, while the public service television systems in Finland, Denmark and, to a lesser degree, Britain assign greater priority to satisfying informed citizenship.

### *Content Analysis*

We monitored news coverage by two major television channels in each country. In the US we selected the two highest-rated network newscasts (ABC and NBC News). In Britain we focused on BBC1 and ITV. DR1 and TV2 were selected in Denmark, and YLE1 and MTV3 in Finland. The US broadcast sources are both commercial (we excluded the Public Broadcasting Service because its news program is watched by very few people), while the European sources are evenly divided between public and commercial broadcasters. We are thus in a position to observe not only cross-national differences in broadcast news content, but also differences between government-owned and commercial broadcasters.<sup>8</sup>

The main evening news program broadcast by the selected sources was monitored for a period of four (non-sequential) weeks during March–April 2007. The exact

dates on which newscasts were recorded were 5–11 March, 19–25 March, 9–15 April, and 23–29 April.

News stories were classified by trained student or research assistant coders in each country. The classification scheme consisted of a common set of content categories developed in advance by the researchers. Pilot testing of these categories revealed that hard and soft news – typically treated as an axiomatic distinction in the American communications literature – were often coded in divergent ways in different cultures. We overcame this problem by first disaggregating the content elements comprising the distinction between hard and soft news, and then coding these as sequential categories.

The first step entailed classifying news reports in terms of topical areas. We defined all news reports about topics such as politics, public administration, the economy and science as “hard”, while news concerned with celebrities, entertainment and sport was classified as potentially “soft”. The second classification was based on mode of treatment. In particular, all news reports on either soft or hard topic areas that were framed in terms of the public good or raised issues about public policy and administration were “reclaimed” as hard. Thus, news reports of the early, initial release from prison of the celebrity heiress Paris Hilton, framed in terms of whether there is equality of justice in America, were re-designated as hard news since they called into question the criminal justice system. But the same story framed in terms of human interest – how the heiress reacted to freedom or how she was dressed and behaved – stayed “soft”. This two-step classification had the desired effect of promoting more consistent coding across countries.<sup>9</sup>

In addition to coding news reports as hard or soft, we classified news as reflecting either domestic or overseas events. Here we used a simple enumeration of nation states. Each news report was classified according to the country or countries referenced in the report. We also coded the news for the presence of international or regional organizations (e.g. the United Nations or European Union).

### *Survey Design*

We designed a survey instrument (consisting of 28 multiple-choice questions) to reflect citizens’ awareness of both hard and soft news as well as their familiarity with domestic versus international subject matter. Fourteen questions tapping awareness of international events (both hard and soft) were common to all four countries. This common set included an equal number of relatively “easy” (international news subjects that received extensive reporting within each country) and “difficult” (those that received relatively infrequent coverage) questions. For example, questions asking American respondents to identify “Taliban” and the incoming President of France (Sarkozy) were deemed easy while questions asking respondents to identify the location of the Tamil Tigers separatist movement and the former ruler of Serbia were considered difficult. In the arena of soft news, easy questions provided highly visible targets such as the popular video sharing website YouTube and the Spanish actress Penelope Cruz; more difficult questions focused

on the site of the 2008 summer Olympics and the Russian tennis player Maria Sharapova.

The non-common items tapped awareness of domestic news, both hard and soft. Here, hard news questions spanned recognition of public officials and current political controversies. Soft news questions focused primarily on national celebrities, either entertainers or professional athletes. We also asked a set of country-specific questions relating to international affairs, but limited to the particular geo-political zone in which each country is situated. Americans, for example, were asked to identify Hugo Chavez (President of Venezuela), while British and Finnish respondents were asked to identify Angela Merkel (Chancellor of Germany), and Danes the incoming British premier Gordon Brown. Once again, we took care to vary the difficulty level of the questions.

The survey was administered online, shortly after the period of media monitoring.<sup>10</sup> As internet access has spread, web-based surveys have become increasingly cost-effective competitors to conventional telephone surveys. Initially plagued by serious concerns over sampling bias (arising from the digital divide), online survey methodology has developed to the point where it is now possible to reach representative samples. Our survey design minimizes sampling bias through the use of sample matching, a methodology that features dual samples – one that is strictly probabilistic and based on an offline population, and a second that is non-probabilistic and based on a large panel of online respondents (Rivers, No date; Rivers & Bailey, 2009). The key is that each of the online respondents was selected to provide a mirror image of the corresponding respondent selected by conventional Random Digit Dialling (RDD) methods.

In essence, sample matching delivers a sample that is equivalent to a conventional probability sample on relevant demographic attributes.<sup>11</sup> From each online panel, we drew a sample of 1000 respondents. In all four countries we sampled all citizens over the age of 18. In the US, UK and Finland, online sample respondents were matched to national samples on education, gender, and age (and, additionally, in the US, in relation to race). In Denmark, the sample was drawn from a representative panel, on the basis of controlled recruitment procedures ensuring a close correlation to the demographics of the total society. The results were later weighted on age and gender.<sup>12</sup> The Appendix provides a comparison of three of the four samples with national census data on relevant demographic variables. (In the case of the fourth (UK), we compare the online sample with a RDD sample.) In general, the samples provided a reasonable match to the national demographics. The one exception was Finland, where the online sample was skewed in the direction of more educated strata. Given the under-representation of the less educated in the Finnish sample, our multivariate analyses of cross-national differences in information will control for respondents' level of education.

The format and appearance of the online surveys were identical in each country. Question order and the multiple-choice options (each question had five possible answers) were randomized and, in order to minimize the possibility of respondents attempting to "cheat" by searching the web, each question remained on the screen

for a maximum of 30 seconds before being replaced by the next question. In addition, the survey link had the effect of disabling the “back” button on the respondent’s browser.

## Results

### *Cross-National Differences in News Content*

Prior to presenting the analysis of cross-national differences in political knowledge, we begin by examining differences in the availability of information. Since our argument is based on assumed disparities in the content of American and European broadcast news, and the content of private and public news broadcasts, it is important that we test these assumptions. We tabulated the average percentage of news reports within each daily newscast that were classified as either hard or soft, and domestic or international. Table 1 presents the results broken down by country and type of television network.

In the case of hard news, the pattern of results proved consistent with expectations. The pure market-based system of the US and the UK’s mixed system offer the lowest level of hard news coverage. The average percentage of hard news reports in the national newscasts for these two countries differs significantly from the corresponding averages for Denmark and Finland. The level of hard news is highest in Finland (and significantly different from all other countries). The Finnish commercial channel delivers just as much hard news as the public broadcaster.

Across all four countries, there is a difference in the content of newscasts aired by commercial and public broadcasters with the latter providing significantly higher

**Table 1.** Cross-national differences in level of hard news and international news

	Average percentage hard news				
	US	UK	Denmark	Finland	All
Private	0.64	0.58	0.54	0.80 <sup>1</sup>	(0.64)
Public	–	0.63 <sup>2</sup>	0.88	0.84	(0.78) <sup>3</sup>
All	(0.64) <sup>4</sup>	(0.61) <sup>4</sup>	(0.71) <sup>5</sup>	(0.82)	
	Average percentage international news				
	US	UK	Denmark	Finland	All
Private	0.22	0.29	0.27	0.29	(0.26)
Public	–	0.28	0.28	0.31	(0.30)
All	(0.22)	(0.29)	(0.28)	(0.30)	

<sup>1</sup>significantly different from all other private broadcasts by two-tailed t test,  $p < 0.05$ ;

<sup>2</sup>significantly different from Danish and Finnish public broadcasts; <sup>3</sup>significantly different from private broadcasts; <sup>4</sup>significantly different from Danish and Finnish broadcasts;

<sup>5</sup>significantly different from Finnish broadcasts.

levels of hard coverage.<sup>13</sup> Surprisingly, it is the Danish commercial broadcaster that provides the lowest level of hard news coverage.

Turning to the question of domestic versus international news, the data show no traces of cross-national differences. National newscasts – from public or private sources – in all four countries focus predominantly on domestic stories. Although the supply of international news is infrequent in all four nations, the geographical range of international coverage is narrowest in the US. The number of countries referenced in US newscasts was approximately two-thirds the number that received mention in European news.

All told, the content analysis confirmed our theoretical expectations, at least with respect to the distinction between hard and soft news. The level of soft news was elevated in the US (a pure market regime) and the UK (a hybrid system). The public service systems of Denmark and Finland, on the other hand, were characterized by significantly higher levels of hard news. Since the costs of acquiring hard news knowledge in the Scandinavian countries are lower (because of higher supply), we expect that motivational factors will be less important as predictors of hard news knowledge in Finland and Denmark. In the case of international news, even though the four media systems proved indistinguishable, we still expect weaker motivation effects in the European nations because of the greater number of news programs aired during the peak television watching hours.

### *Cross-National Differences in Information*

We begin by presenting the simple means corresponding to the average proportion of respondents in each country who provided correct answers to the questions about domestic, international, hard, and soft news (see Table 2). As anticipated, Americans were significantly less informed about hard news. On average, 50% of the American sample correctly answered the hard news items respectively. In contrast, the average level of correct responses to the hard questions was 63%, 70%, and 75% in the three European countries. All three European means differed significantly from the US

**Table 2.** Mean knowledge scores

	US	UK	Finland	Denmark
Soft News	0.66 <sup>2,3,4</sup>	0.81 <sup>1,4</sup>	0.81 <sup>1,4</sup>	0.69 <sup>1,2,3</sup>
Hard News	0.50 <sup>2,3,4</sup>	0.63 <sup>1,3,4</sup>	0.70 <sup>1,2,4</sup>	0.75 <sup>1,2,3</sup>
Domestic News	0.78 <sup>2,3,4</sup>	0.75 <sup>1,3,4</sup>	0.83 <sup>1,2,6</sup>	0.85 <sup>1,2,4</sup>
International News	0.40 <sup>2,3,4</sup>	0.69 <sup>1,3,4</sup>	0.66 <sup>1,2</sup>	0.65 <sup>1,2</sup>
N	1000	998	1000	1208

<sup>1</sup>significantly different from the US,  $p < 0.01$ , two-tailed t test; <sup>2</sup>significantly different from the UK,  $p < 0.01$ ; <sup>3</sup>significantly different from Finland,  $p < 0.01$ ; <sup>4</sup>significantly different from Finland,  $p < 0.05$ ; <sup>5</sup>significantly different from Denmark,  $p < 0.01$ ; <sup>6</sup>significantly different from Denmark,  $p < 0.05$ .

mean ( $p < 0.01$ ). Somewhat surprisingly, given the overrepresentation of soft news in US newscasts, Americans were on average slightly *less* informed about soft news than the Europeans. The average level of soft news knowledge in the US was 66%; in Britain, Denmark and Finland, the corresponding average was 81%, 69%, and 81%, respectively. The cross-national differences in soft news knowledge are not as robust as the differences with hard news knowledge. Although the US level of soft news knowledge proved statistically distinct, the average deficit (US versus Europe) was only 10.5% as compared with 18.9% for hard news knowledge. That Europeans are more knowledgeable about both soft and hard news suggests that they are more attentive to all forms of news.

Turning to the distinction between international and domestic news, the heavily domesticated content of newscasts in all four countries was matched by small (but significant) cross-national differences in the level of domestic political knowledge. The Americans moved slightly ahead of the British on domestic knowledge, but both countries trailed Scandinavia by a substantial margin. In the case of international news, the Americans returned to their position as the least informed nation. The knowledge gap between the Americans and the Europeans was huge; the probability of a correct response on the international questions was, on average, 26.3 points lower in the US.

Next, we turn to testing our expectation concerning the differential impact of motivational or demand-side factors on hard and soft news knowledge, and international and domestic knowledge. Our measure of motivation is an index of political involvement tapping interest in politics and frequency of political discussion.<sup>14</sup> We regress the four measures of political knowledge against two dummy variables representing the UK and Scandinavia (we pooled across Finland and Denmark because of their similar levels of knowledge) as well as the index of political involvement, education, gender, and the self-reported frequency of exposure to national newscasts.<sup>15</sup> Each equation also includes a pair of interaction terms corresponding to the differential impact of political involvement on knowledge (*vis-à-vis* the impact in the US) in the UK and Scandinavia. We expect negatively signed interaction coefficients indicating that the impact of interest is weakened in the UK and Finland. More precisely, we expect that the weakening of the effects of political interest will be most pronounced for the relatively “difficult” subjects of hard and international news. Unlike the less-interested Americans, who can choose to avoid news programming, less-interested Europeans are more likely to acquire some hard and international news knowledge through inadvertent encounters with news programs. To test this expectation, we assess the significance of the difference in the magnitude of the two country-interest interactions across the indices of hard and soft news knowledge, and the indices of international and domestic knowledge.<sup>16</sup> The results of the regression analyses are presented in Table 3.

The significant coefficients for the UK and Scandinavia dummy variables show that the substantial cross-national differences presented earlier were unaffected by the controls for interest, education, exposure to TV news, and gender. Generally, Europeans did significantly better than Americans in all knowledge domains; and

**Table 3.** Cross-national differences in knowledge and the effects of political interest

	Hard news			Soft news		
Constant	0.134	(0.017)	**	0.638	(0.016)	**
UK	0.166	(0.018)	**	0.130	(0.017)	**
Scandinavia	0.292	(0.015)	**	0.089	(0.014)	**
Education	0.042	(0.004)	**	0.025	(0.003)	**
Age	0.032	(0.004)	**	-0.052	(0.004)	**
Female	-0.055	(0.006)	**	0.003	(0.006)	
National News	0.025	(0.003)	**	0.024	(0.003)	**
Interest	0.483 <sup>1</sup>	(0.021)	**	0.153	(0.020)	**
Interest × UK	-0.088 <sup>1</sup>	(0.030)	**	0.001	(0.028)	
Interest × Scandinavia	-0.149 <sup>1</sup>	(0.025)	**	-0.075	(0.024)	**
Adj. R <sup>2</sup>	0.454			0.159		
N	3962			3962		

	International news			Domestic news		
Constant	0.189	(0.017)	**	0.554	(0.016)	**
UK	0.347	(0.018)	**	-0.021	(0.017)	
Scandinavia	0.338	(0.016)	**	0.054	(0.015)	**
Education	0.042	(0.004)	**	0.028	(0.004)	**
Age	-0.017	(0.004)	**	0.009	(0.004)	*
Female	-0.048	(0.006)	**	-0.018	(0.006)	**
National News	0.018	(0.003)	**	0.032	(0.003)	**
Interest	0.445 <sup>1</sup>	(0.022)	**	0.237	(0.021)	**
Interest × UK	-0.110	(0.031)	**	-0.067	(0.029)	*
Interest × Scandinavia	-0.181 <sup>1</sup>	(0.026)	**	-0.050	(0.025)	*
Adj. R <sup>2</sup>	0.402			0.202		
N	3962			3962		

Excluded category is US; <sup>1</sup>significantly different from the coefficient in the comparable subject domain (“soft” or “domestic” news). Cell entries are OLS estimates with their standard errors in parenthesis. \* $p < 0.05$ ; \*\* $p < 0.01$ .

Scandinavians proved the most knowledgeable on hard news. The effects of education and gender, although significant (men were generally more knowledgeable, except in the case of soft news), paled in comparison with the effects of country.

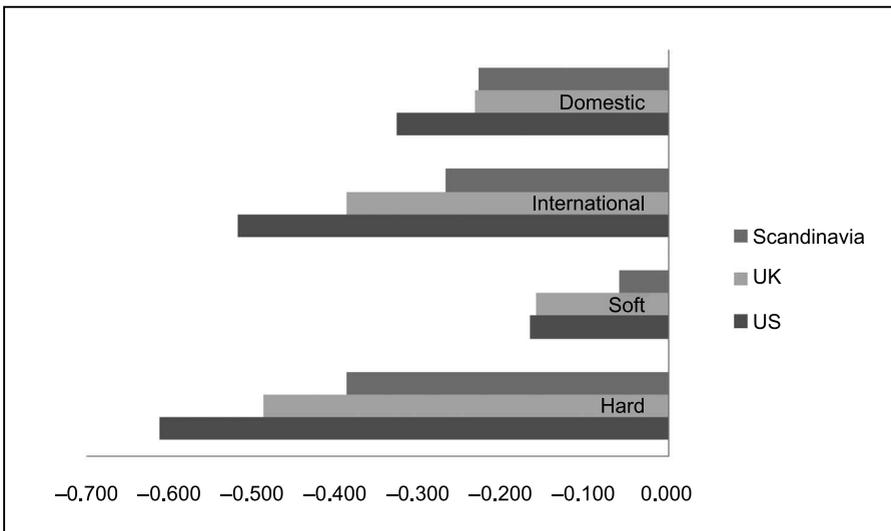
The “main effect” coefficient for interest (involvement) represents the effects of political interest in the US, the excluded country in Table 3. Thus, in the case of hard news, Americans’ knowledge scores increased by 0.483 from the lowest to the highest level of the political interest scale. As we anticipated, the effects of interest in the US were significantly stronger for hard (over soft) news knowledge and for international (over domestic) news knowledge. Less interested Americans were especially ignorant about subject matter infrequently covered in American newscasts.

Against the baseline of the US, the impact of political interest in Britain and the Scandinavian countries was consistently weaker, indicating a smaller disparity in the level of knowledge between the most and least involved strata. The weakened effects of interest appeared most clearly among Scandinavian respondents. Moreover, as expected, the diminished role of political interest in the UK and Scandinavia was significantly more pronounced for hard news knowledge and international knowledge, respectively.

The significant erosion of the effects of political motivation on all four forms of political knowledge in Britain and Scandinavia is shown graphically in Figure 1. The data points correspond to the average fitted knowledge scores of the most and least interested American, English, and Scandinavian respondents based on the equations estimated in Table 3.

For all four knowledge indices, the graph shows a substantial decline in the knowledge differential associated with interest as one moves from the US to the UK to Scandinavia. The size of the knowledge gap in the US suggests that the US deficit in knowledge is concentrated among less interested citizens. Among the uninterested, Europeans are much more informed than Americans, but at the higher levels of interest, cross-national differences in knowledge are substantially reduced. These data suggest that the availability of entertainment programs and the limited frequency of national news programming have combined to create a veritable knowledge chasm between more and less interested Americans.

In summary, the multivariate analyses confirm that citizens in market-based systems are information-deprived in comparison with those exposed to public



**Figure 1.** Differential effects of political interest Knowledge scores of the most interested subtracted from knowledge scores of the least interested.

service media. In market systems, political knowledge depends heavily upon political interest; in public service systems, however, it is possible for the less interested to overcome their motivational handicap because of the greater availability of news programming.

To this point we have only compared citizens' level of knowledge in relation to the level of news coverage accorded generic news subjects. We have not differentiated between news items that were especially newsworthy (or lacking in newsworthiness) in particular countries. We can provide a more precise test of the motivation–supply interaction by looking at the differential effects of political interest on knowledge about those news items that received either extensive or negligible levels of news in each of the four countries in our sample. Our measure of item-specific news coverage is based on a tabulation of news reports in a sample of newspapers (in the case of the UK, we also tracked broadcast news coverage) concerning each of the 28 targets asked about in the survey during the six months preceding the survey.<sup>17</sup> Our argument is that public awareness of highly newsworthy issues is likely to diffuse across levels of interest. But when the same issue is ignored by the media, knowledge of the issue will be limited to the most attentive. In short, the volume of news coverage conditions the impact of political interest on knowledge.

We grouped all knowledge questions in the hard and soft domains into two categories based on the amount of media coverage in the six months preceding the survey. The seven knowledge questions that attracted the highest level of coverage in each nation were placed in the “extensively covered” category and compared with all remaining items. We computed knowledge scores corresponding to hard and soft news knowledge for each of the newsworthiness categories, then replicated the regression analysis reported earlier for each of the four samples. These results are presented in Table 4.

Although the effects of political interest proved significant across both levels of newsworthiness, the expected pattern – stronger effects of interest on knowledge when news coverage is scarce – was observed in three of the four countries. The effects of the interest index were significantly stronger for the less newsworthy questions in the US, UK, and Denmark. In Finland, the effects of political interest on knowledge were not conditioned by level of news coverage. Thus, with one

**Table 4.** Variable effects of interest on knowledge of lightly and extensively covered subjects

	Lightly covered		Extensively covered	
US	0.380 <sup>1</sup>	(0.030)**	0.283	(0.027)**
UK	0.400 <sup>1</sup>	(0.028)**	0.145	(0.022)**
Finland	0.138	(0.029)**	0.185	(0.024)**
Denmark	0.283 <sup>1</sup>	(0.027)**	0.144	(0.021)**

<sup>1</sup>significantly different from the coefficient for extensively covered news subjects; cell entries are OLS estimates with standard errors in parenthesis; \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

exception, the results generally replicate the differences in the predictive importance of political interest between the US and the European countries. When the level of news coverage is low, interest becomes an especially important antecedent of knowledge, but when news coverage is relatively abundant, knowledge becomes less dependent on motivation.

## **Conclusion**

Our results demonstrate that Americans are significantly less informed about public affairs than Europeans, a finding in keeping with past research (Dimock & Popkin, 1997). Our results also support the thesis that the American shortfall in knowledge is attributable in part to the distinctive information context in the United States. American news media are driven to maximize audience share. Therefore, broadcast news programming is aimed at entertainment more than education. European media tend to cover hard news subjects more extensively and air news programming more frequently. As a result, there are significant cross-national differences in the costs of acquiring hard news and international news knowledge. The costs are higher in the US and political knowledge among Americans is heavily dependent upon individuals' interest in politics. The costs are lower in the Scandinavian public service model, allowing less motivated Danes and Finns to acquire more political information than their American counterparts.

Of course, we recognize that there are multiple competing explanations for these observed cross-national differences in knowledge. Other elements of the national experience such as varying degrees of historical involvement in international events, variations in governmental structure, geographic size, and other characteristics (such as sense of personal or governmental efficacy) could well play a role. For example, while the United States had little involvement in international affairs prior to World War II, the British Empire spanned some 20% of the earth's land mass as recently as 1925 (as pointed out by Rudyard Kipling). One of the cultural byproducts of the imperial tradition might include a heightened sense of interest in overseas events, thus contributing to the higher level of information about international news observed in Britain.

A further divide between America and most European societies concerns size. As a much larger entity, the United States consists of multiple news jurisdictions, with local events and issues often taking precedence over regional, national, or international news. In fact, the level of local broadcast news in most areas exceeds national news by a factor of 4:1 (see Iyengar & McGrady, 2007). Had we asked respondents questions about local or regional issues, the findings may have been altered.

While acknowledging the influence of myriad cultural, geographical and other cross-national differences as alternative explanations for our results, we remain confident that properties of national media systems are implicated as causes of how much people know about different genres of news. Countries in which the norms of public service broadcasting are taken seriously are, as indicated by the content analysis, countries in which the daily information flow is more likely to offer frequent

references to hard news. Thus, for citizens in these countries, the opportunity costs of exposure to hard news reports are significantly lowered. In countries where the principal sources of news are market-driven, on the other hand, individuals must invest greater effort to acquire information about current issues.

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## **Notes**

1. There is a growing interest in the interaction between individual-level and contextual factors. Researchers who address the importance of media markets, for instance, have identified properties of these markets that influence exposure to news and campaign-related information (for example, see Althaus et al., 2008; Snyder et al., 2008). There is also a parallel emerging literature on the role of neighborhood composition in shaping exposure to news and political participation (see Paek et al., 2005).
2. For a pioneering analysis of the joint effects of individual-level factors and the information context on knowledge, see Jerit et al. (2006).
3. The emergence of hard news in the US is described in Kalb (2001). A more general analysis of the role of market forces in shaping news is given in Hamilton (2004).
4. ITV's news broadcast was shifted to 10am on weekdays in 2009.
5. Our argument about the number of opportunities to encounter broadcast news applies only to *national* news programs. In the US, in response to market pressures, television stations have increased their supply of local news. In some media markets (e.g. Los Angeles), local news airs continuously. The content of local news, however, tends to emphasize sensationalized accounts of violent crime with little attention provided to issues of national or international politics (see Gilliam & Iyengar, 2000; Klite et al., 1997). Although it is true that cable news organizations in the US air news-oriented programming during prime time, the combined audience for the three major cable television networks in the US, is considerably lower than the audience for one of the three major national networks. For evidence on the audience share of cable news and network news (see Iyengar & McGrady, 2007).
6. See Robinson (1976: 426), who provides the classic account of the inadvertent audience for national network news in the US. In his words, the inadvertent audience consists of those "who fall into the news" as opposed to those "who watch for the news".
7. Most research on the attentiveness-based knowledge gap has been conducted by researchers in mass communication (see Eveland & Scheufele, 2000; Graziano, 1983; Kwak 1999; Tichenor et al., 1970). Although the standard knowledge gap is typically defined in terms of socio-economic status (e.g. education), there is also evidence of differential acquisition of information in relation to gender (Dow, 2008; Mondak & Anderson, 2004).
8. We also tracked a sample of newspapers in each country, but do not present the results here for multiple reasons. Most importantly, the market versus public service distinction applies to broadcasters, not newspapers. All daily newspapers in the four-country sample are privately owned and subject to the same market pressures. The more appropriate operational indicator of the public service versus market-based system, therefore, is the performance of broadcasters. Second, there are significant differences in the format of American and European newspapers. US dailies are published in multiple sections corresponding to news, sports, entertainment, and other specialty features. Most European newspapers are more compact, combining different content areas into a

single section. In our analysis of the newspapers, we limited the US analysis to the news section of three daily papers, excluding all other feature sections. In the case of the European papers, however, we coded the entire paper. This created issues of non-comparability because the sample of US newspaper stories represented a population of news stories focusing exclusively on public affairs while the sample of European news reports represented a population of public affairs, sports, and entertainment stories. For instance, over the four-week period tracked by the content analysis, the European papers published 2188 stories on sports. In contrast, the American sample of news reports included only 18 sports-related stories. Given the different appearance of American and European papers and the exclusion of all non-news sections from the US newspapers, the results of the content analysis of print sources are artificially skewed in the direction of greater hard news coverage in US newspapers. Moreover, the inclusion of *The New York Times*, arguably the most substantive paper in North America, further skewed the US print data in the direction of hard news.

9. A subset of news reports were coded by multiple coders. The overall level of inter-coder agreement (averaged across all variables) was 88% in Finland, 84% in the UK, 82% in Denmark, and 81% in the US.
10. The survey was conducted in the 8 day period between 28 May and 4 June 2007. It was carried out by Polimetrix (PMX) in the US, YouGov in the UK, Zapera in Finland (both of these as subcontractors to PMX), and in Denmark by Catinet.
11. For a more technical discussion of sample matching, see Rivers (No date), "Sample Matching".
12. The fact that our online samples were matched according to a set of demographic characteristics does *not* imply that the samples are unbiased. All sampling modes are characterized by different forms of bias and opt-in internet panels are no exception. In the US, systematic comparisons of PMX matched samples with RDD (telephone) samples and face-to-face interviews indicate trivial differences between the telephone and online modes, but substantial divergences from the face-to-face mode (see Hill et al., 2007; Malhotra & Krosnick, 2007). In general, online samples appear biased in the direction of politically engaged and attentive voters. This would suggest that our online samples are somewhat better informed about public affairs than samples based on personal or telephone interviews. In Denmark, the online survey reported was replicated using a comparable telephone-based sample. There were minor differences between the results, in the direction of higher knowledge scores in the online sample.
13. This pattern has been documented in several previous studies including Heinderyckx (1993), Peter et al. (2004), and Holtz-Bacha and Norris (2001).
14. The questions were worded as follows: (1) "Generally speaking, how interested would you say you are in politics?" The response options ranged from "not at all interested" to "very interested". (2) "How many days in the past week did you talk about politics with family or friends?" The response options ranged from "everyday" to "none". We averaged the responses and converted scores to a 0–1 scale. The correlation ( $r$ ) between two items was 0.560.
15. Education was scored 0 for respondents with no more than a high school education, 1 for those with some college or vocational training, and 2 for college graduates. Males were coded as 0, females as 1. Exposure to national TV news was reported on a scale ranging from "almost every day" to "not at all".
16. We used a Wald test (see Harrell, 2001) to assess the null hypothesis that the regression coefficients for hard and soft news are equal.
17. In the US, we used the Lexis-Nexis database to track the number of news reports bearing on the 28 targets that appeared in the *Washington Post*, the *Los Angeles Times*, and *USA Today*. The parallel analysis in the UK tracked coverage in BBC1 (from the BBC archive) and ITV News (from ITV News source), the *Daily Mail*, *Guardian*, *Telegraph*, and *Sun* (from Lexis-Nexis). For Denmark, we used the Infomedia Database to track news reports published in the national broadsheet *Jyllands-Posten*, the national tabloid *Ekstra Bladet*, and the regional daily, *JyskeVestkysten*. Finally, the Finnish data were acquired from the *electronic archives of Aamulehti* (a regional daily), *Helsingin Sanomat* (a national broadsheet) and *Iltä-Sanomat* (a national tabloid).

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## Appendix 1. Sample demographics

	US sample	US census <sup>1</sup>	UK sample	2005 UK election study <sup>2</sup>	FIN sample	FIN census <sup>3</sup>	DK sample	DK census <sup>4</sup>
% Male	48.3	47	47.9	47	49.4	49	49.7	50
Median age	43	46	44	49	45	40.9	42	43
High school*	46.4	42.9	46.8	56.7	34.6	72.4	37.5	41.1
Some college	28.6	29.6	25.4	28.0	31.9	11.6	31	38.6
College graduate	25	27.5	27.8	15.3	33.5	16	31.5	20.3

\*Danish education data coded as “short”, “middle”, and “long”.

Sources: <sup>1</sup><http://www.census.gov/prod/2001pubs/c2kbr01-12.pdf>; <sup>2</sup><http://www.essex.ac.uk/bes/2005/Survey%20with%20Mailback.htm>; <sup>3</sup>KTY1B07e. Työikäisen väestön (15-74v.) pääasiallinen toiminta; koulutuksen mukaan 2007 muuttujina Tutkinto (6 nro), Koulutusaste, Ikä; Sukupuoli ja Pääasiallinen toiminta; <sup>4</sup>Danmarks Statistik, Databank, Tabel: KRHFU1.