International Journal of Public Opinion Research Vol. 25 No. 4 2013

doi:10.1093/ijpor/eds018 Advance Access publication 19 June 2012

The Dynamics of Political Interest and News Media Consumption: A Longitudinal Perspective

Jesper Strömbäck[1], Monika Djerf-Pierre[2] and Adam Shehata[3]

[1]Department of Media and Communication, Mid Sweden University, Sweden; [2]Department of Journalism, Media and Communication, University of Gothenburg, Sweden; [3]Department of Media and Communication, Mid Sweden University, Sweden

Abstract

This longitudinal study investigates whether the impact of political interest—a key motivational factor behind news consumption—on various forms of news consumption has increased over time. The analysis is based on a unique large-scale representative annual survey conducted in Sweden over the years 1986–2010, enabling a comprehensive analysis of citizens' total and specific news consumption across multiple channels and platforms. Results show that news consumption has become more polarized between news-seekers and news-avoiders over time, and that political interest has become a more important determinant of news consumption in today's high-choice media environment.

The rise of new media, the decline of many old media, and an ever-increasing supply of information have raised a host of new questions related to news media consumption, its antecedents, and its consequences. Most importantly, increasing supply of information forces people to become more selective when deciding what media and media content to choose (Bennett & Iyengar, 2008; Holbert, Garrett & Gleason, 2010). Audience preferences thus become more important for explaining news media use (Prior, 2005, 2007; Stroud, 2011), which increases the voluntary segmentation (Prior, 2005, p. 578) or "stratamentation" (Bennett & Iyengar, 2008, p. 717) of audiences. This may have far-reaching consequences for political learning and participation, particularly if the voluntary segmentation exacerbates inequalities in political knowledge and participation.

All correspondence concerning this article should be addressed to Jesper Strömbäck, Department of Media and Communication, Mid Sweden University, S-851 70 Sundsvall, Sweden.
E-mail: jesper.stromback@miun.se

However, this is exactly what Prior (2007) found in his study of how increasing media choice in the United States has influenced news media use and, as a consequence, political knowledge and behaviors. According to his results, "Greater media choice increases inequalities in political involvement", for example with respect to "gaps in news exposure, political knowledge, and turnout" (2007, p. 142). The main reason is that greater media choice increases the impact of political motivations and interest on news media use.

Thus far, there is however very limited research on the *changing impact* of individual-level factors on news media use, that is, if and how media environmental factors that vary across time or space moderate the influence of individual-level factors in explaining news media use (but see Althaus, Cizmar, & Cimpel, 2009; Cooper & Tang, 2009; Elvestad & Blekesaune, 2008; Prior, 2005, 2007; Shehata & Strömbäck, 2011). While there is plenty of research on changing media use across demographics, there is virtually no research that systematically investigates whether psychological and motivational factors on the individual level have a *stronger* or *weaker* impact today compared with 5, 10, or 20 years ago.

This holds true also of the impact of political interest, which is "typically the most powerful predictor of political behaviors that make democracy work" (Prior, 2010, p. 747). While research repeatedly has shown that there are correlations between degree of political interest and the extent to which people follow the news (Bennett, Rhine, & Flickinger, 2000; Boulianne, 2011; David, 2009; Delli Carpini, 2004; Drew & Weaver, 2006; Strömbäck & Shehata, 2010), most research treat this linkage as a static phenomena unaffected by media environmental factors. Partly this is because most research focuses on one particular point in time, usually an election campaign, and the lack of longitudinal research. Nevertheless, this is problematic both because of the major changes in media environments and because "the role of political interest [...] may be changing across time" (Boulianne, 2009, p. 202).

If political interest is becoming a stronger predictor of news media use, it may open up a new "democratic divide" (Min, 2010), with far-reaching consequences for political learning, political participation, and for how democracy works. Against this background, the purpose of this study is to investigate the impact of political interest on news media use across time. More specifically, we will investigate (a) how changes in the media environment have affected the share of news-seekers and news-avoiders, (b) if the impact of political interest on *total* news media use (TNMU) has become stronger across time, and (c) if the impact of political interest on news media use has become stronger for *different media types* across time.

Although research suggests that the relationship between political interest and news media use is reciprocal, most research suggest that the impact of political interest on media consumption is greater than vice versa (Boulianne,

2009; Strömbäck & Shehata, 2010). In this study we will thus treat political interest as the independent and media use as the dependent variable.

Opportunities, Motivations, and Abilities

On a general level, any behavior such as exposure to news media or political learning is contingent upon a combination of *opportunity*, *motivation*, and *ability* (Cooper & Tang, 2009; Delli Carpini, & Keeter, 1996; Delli Carpini, Keeter, & Kennamer, 1994; Prior, 2007). As argued by Luskin (1990, pp. 334–335), "Bedouins in the Sahara do not become champion swimmers; ordinary people who enjoy music do no compose great symphonies; professors with research assistants do not do their own legwork. They lack the opportunity, the ability, and the motivation, respectively." This is also known as the OMA framework.

What opportunity, motivation, and ability refer to more exactly depends on what kind of behavior we are interested in. Within the context of news media use, *opportunity* mainly refers to the availability of different kinds of news and non-news media, including access to different media technologies; *motivation* to how interested people are in news media use; and *ability* to how skilled people are in comprehending the news (Delli Carpini & Keeter, 1996, p. 106–116; Luskin, 1990, pp. 335–336; Prior, 2007, p. 28).

While motivation and ability are individual-level factors, opportunity is a contextual, media environmental factor. This is important for two reasons. The first is that it suggests that people's news consumption cannot be explained by individual-level factors only (Althaus, Cizmar, & Cimpel, 2009; Delli Carpini, Keeter, & Kennamer, 1994). The second reason is that the media environment is important not only in itself, but also because "changes in the media environment affect how individual-level factors work" (Prior, 2007, p. 15. See also Delli Carpini & Keeter, 1996; Shehata & Strömbäck, 2011). In essence, the impact of ability and motivation will depend on the media environment.

For example, in a media environment where there are few media to choose from, individual preferences will have a limited impact on people's news consumption. Both those who are politically interested and those who are not interested may watch television news, the former group because they are interested in following the news and the latter group primarily because they are interested in watching television (Prior, 2005, 2007; Wonneberger, Schoenbach, & van Meurs, 2011). As the number and variability of media choice increases, people will increasingly have to choose the media and the media content that they wish to follow. The need for "strategies for sorting through" different media increases (Stroud, 2011, p. 169), and content preferences become more important. While those who are politically interested will

continue to follow the news, and may become even more avid news junkies, those who are less interested will increasingly seek to avoid news, instead choosing other kinds of media content. As argued by Ksiazek et al. (2010, p. 552), "the most important effect of increased choice is a growing polarization of news consumption [. . .] whereby people selectively attend to or avoid news." Such a polarization should—if it is a valid characterization of current trends in news consumption—be evident in greater shares of news-seekers and news-avoiders over time. A recent cross-national study including data from 33 European countries found, for instance, that the share of disconnected citizens—that is, citizens who never follow, or actively avoid, news about politics and current affairs in traditional media—has grown across Europe between 2002 and 2008 (Blekesaune, Elvestad, & Aalberg, 2012). Therefore, with respect to citizens' overall news consumption across multiple media outlets, we expect the following:

H1: The share of news-seekers and news-avoiders in the population will increase over time.

As a result, a motivational factor such as political interest will become a stronger predictor of news media use not because people have changed, but because the media environment has. As argued by Prior (2007, p. 19), "news consumption, learning about politics, and electoral volatility have changed not so much because people are different today, but rather because the media environment is different. People have not necessarily changed; they have merely changed the channel." Based on this, and controlling for other factors that may have an impact on news media use, our second hypothesis is:

H2: The impact of political interest on overall news media use will increase over time.

There may however be differences across different types of news media. Generally speaking, the impact of political interest on news media use should be greater for news media where the probability for *accidental exposure* (Prior, 2007; Curran, Iyengar, Lund, & Salovara-Moring, 2009; Iyengar et al., 2010) is smaller compared with news media where the probability is greater. Thus, the impact of political interest should be greater for exposure to online news than for exposure to television news or newspapers, as suggested by research showing correlations between political interest and exposure to online political information (Best & Krueger, 2005; Boulianne, 2009, 2011; Min, 2010; Norris, 2001). To date, there is however no research systematically investigating the probability of accidental exposure across news media. Neither is there any research on how *changes* in media environments may moderate the differential impact of political interest on the consumption of different news media across time. With respect to studies comparing the impact of political interest on consumption of different news media, Boulianne (2011) found that political interest had a stronger effect on watching TV news than on reading online

news or print news. Strömbäck and Shehata (2010), on the other hand, found that political interest had a stronger effect on watching public service (but not commercial) TV news and listening to public service radio news than on reading print or online news.

While research does not provide any guidance as to whether the changing impact of political interest should be greater for television than for radio, etc., the impact of political interest should increase over time for all media types. The rationale is that all media types form part of the same media environment, and since the mechanism behind the increasing impact of political interest (motivation) on news media use is increasing choice across time (opportunity), this should affect the use of all media types. Thus, our third hypothesis is:

> *H3:* The impact of political interest on news media use will increase over time for all media types.

Whether the impact of political interest will increase more for the use of some media rather than others is however a more open question, where there is insufficient research to guide specific hypotheses. Instead of posing hypotheses, we thus ask:

> *RQ1: How has the impact of political interest on the consumption of different kinds of news media changed over time?*

To investigate these hypotheses and answer our research question, we will investigate how news media use has changed across time as well as the impact of political interest on both total news media use and the use of different news media types across the past 25 years. Empirically, the study will focus on the case of Sweden. There are three reasons for that.

First, Sweden constitutes a typical example of what Hallin and Mancini (2004) have identified as the democratic corporatist model of media and politics. One distinguishing feature of democratic corporatist countries is a high level of mass circulated newspapers, and in fact, Sweden is one of the countries in the world with the highest circulation of newspapers (Elvestad & Blekeasune, 2008; Hallin & Mancini, 2004; Weibull, 2005). Also on a more general level, Sweden is characterized by high and rather stable news consumption across the years (Carlsson, 2011). In these respects, Sweden constitutes a tough test for the hypothesis of an increasing impact of political interest on news media use across time.

Second, as a democratic corporatist country and in many other respects related to media and politics, Sweden constitutes a different case compared to the United States (Hallin & Mancini, 2004) where most research on the linkage between political interest and news media use has been carried out, and where Prior (2005, 2007) found evidence that changes in the media environment has had an effect on the impact of political interest on news

media use. If our study would show the same pattern of results, it would strengthen the validity of the claim that changes in media environments have resulted in an increasing impact of political interest on news media use across time.

Finally, in Sweden we have access to a unique and annual survey focusing on a range of issues related to media and politics, which has been carried out since 1986. The details of this study, and our methodological design, will be described further in the next section.

Methodology and Data

The data used in this study is a pooled dataset consisting of yearly surveys conducted by the SOM Institute at University of Gothenburg (Nilsson & Wernersdotter, 2011). From 1986, a random sample of the Swedish population consisting of between 3000 and 9000 persons aged 15–85 years (some surveys 16–75) receive the survey. The response rate is on average 65%, ranging from a low of 58% (2008) to a high of 70% (1987). The distribution of responses equals the proportion of the Swedish population when it comes to age, gender, social class, education, etc. The dataset used consists of pooled data where *all the surveys* over the years 1986–2010 have been joined together in a single set.

Dependent Variables

The key dependent variable will be different measures of news media use. Our main focus will be on Total News Media Use (TNMU) and the consumption of news media on four platforms: morning newspapers (in print and/or online), tabloid newspapers (in print and/or online), national television and national radio.

The main challenge was to handle the pooling of 24 different datasets and to construct new variables that allow for an accurate comparison of the levels of news media use over time. The variables must measure the level of news media use in a way that is comparable, yet takes the fundamental changes in the supply of new news media platforms through online publishing and the launching of commercial radio and television into account. To achieve this, we transformed the original media use measures so that they can be treated as interval scales. The only true interval scale in the survey is the variable "newspaper reading," which ranges from 0 (never/less frequently) to 7 (7 days a week). In order to obtain interval measures for the other news media use variables, we recoded the original ordinal variables so that values assigned to the categories emulates the scale used in the newspaper reading variable. For instance, the response alternatives for "watching the news in *Aktuellt* or *Rapport*" were assigned the following values: *never* = 0, *less frequently* = 1, *1–2 days/week* = 2, *3–4 days/week* = 3, *5–6 days/week* = 5, and

daily = 7. Furthermore, we constructed an index measuring the individual's TNMU on all four news media platforms. For example, an individual's newspaper use is measured so that it registers the highest score, no matter if the reading is online or print. An individual who reads online newspapers 3 days/week and a print newspaper 7 days/week would thus score seven on the newspaper reading scale. Although it might be interesting to study differences across platforms, this procedure of opting for a "platform-neutral" approach is the only one that allows us to include online news media consumption into the already existing time series. The same principle of equal value is applied to television and radio news.

Newspaper reading. Respondents were asked how often they were reading at least one morning newspaper in print or online. The response alternatives ranged from 0 (less often than 1 day/week) to 7 (7 days/week). A separate variable measuring newspaper reading in "print only" was also constructed. Here the same question on reading at least one morning newspaper was used, but only the "print" alternative was selected.

TV news. Respondents were asked how often they were watching the news programs in public service television (*Rapport* or *Aktuellt*) or *Nyheterna* in commercial TV4. Responses were coded as follows: 0 = *never*, 1 = *less frequently*, 2 = *1–2 days/week*, 3 = *3–4 days/week*, 5 = *5–6 days/week*, and 7 = *daily*.

Public service television news. The same question and coding of responses as above was used, but only the part related to how often the respondent is watching the news programs in public service television (*Rapport* or *Aktuellt*) was selected.

Radio news. Respondents were asked how often they were listening to *Ekot* (public service news) or news in private radio. Responses were coded as follows: 0 = *never*, 1 = *less frequently*, 2 = *1–2 days/week*, 3 = *3–4 days/week*, 5 = *5–6 days/week*, and 7 = *daily*.

Public service radio news. The same question and response scale as above was used but only the part related to how often the respondent was listening to the public service radio news show *Ekot* was included.

Tabloids papers. Respondents were asked how often they were reading any of the tabloids *Aftonbladet, Expressen, GT,* or *Kvällsposten* in print or online. Responses were coded as follows: 0 = *never*, 1 = *less frequently*, 2 = *1–2 days/week*, 4 = *3–4 days/week*, and 6 = *6–7 days/week*.

One of the main dependent variables is the *Total news media use index* (TNMU-index). This index aims at capturing the full extent of an individual's exposure to news with respect to all four media types. The index was computed by summing up the individual scores for all four media types (TV news + radio news + newspapers online/print + tabloid papers online/print) for each respondent. Thus, the index varies between 0–27, and the distribution of the

variable is very close to a normal distribution. The construction of the TNMU-index does not presume unidimensionality or a high correlation between the different varieties of news media use. Instead, the individual's pattern of news media use may vary so that some seek out all sorts of news, some avoid all news, while others choose different combinations of news media.

Independent Variables

The independent variables used in the study are interest in politics, education, gender, age and time. *Interest in politics* is measured by the question, "How interested are you generally in politics?" The response alternatives range from 1 (*not at all interested*) to 4 (*very interested*). The level of education is derived from a question containing eight educational alternatives, which were recoded into a variable with the three categories: 1 = *low* (primary education), 2 = *medium* (more than primary education but not college or university), and 3 = *high* (college or university education). Respondents were furthermore asked to indicate their gender (1 = *female* and 2 = *male*) and age (16–75 years). Finally, a variable indicating "time" was constructed with the range 0–24, where 1986 = 0 and 2010 = 24.

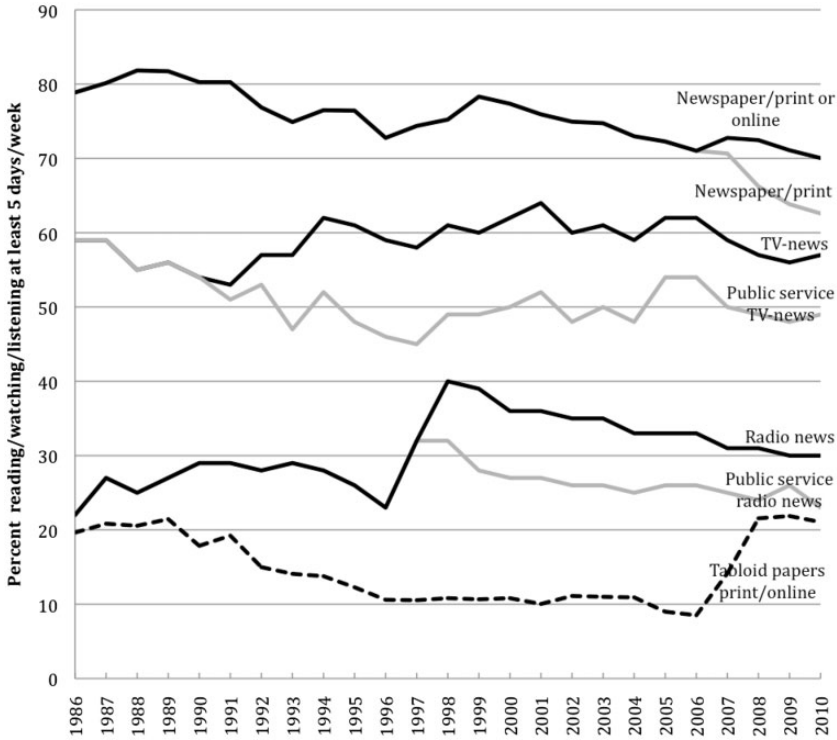
Results

Before investigating the hypotheses and answer the research question, we will begin by describing changes in patterns of news media use 1986–2010. This is a period that witnessed major changes in the media environment. Among them are the introduction of cable and private satellite television (from 1987 onward); commercial terrestrial television (in 1992 and onward) and digital television (from 1999 and onward); the introduction of commercial radio news (from 1993); and the introduction of the Internet (from mid-1990s and onward) (Djerf-Pierre & Weibull, 2001).

Considering these major changes, it is no surprise that news media consumption patterns have changed (see Figure 1). Newspaper reading has decreased from about 80 percent reading at least one newspaper 5 days/week in the late 1980s to about 70 percent three decades later. Despite the continuous decrease in reading, the results substantiate Sweden as a country where newspaper readership is very high (Shehata & Strömbäck, 2011; Weibull, 2005). Furthermore, the decline in readership has been reduced by the growth of online newspaper reading. From 2007 onward, as questions about online newspaper consumption were added to the survey, it is clear that the attraction of newspaper websites dampened the decline of newspaper consumption.

TV news viewing, on the other hand, displays an oscillating curve. The viewing of news on public service television declined from 1986 until late 1990s, but increased somewhat after that. When questions about watching

Figure 1
Changing news media use 1986–2010 (percent).



Note*: Newspapers: Reading at least one newspaper (morning papers, mainly subscribed) in print and/or online at least 5 days/week. TV news: Watching* Rapport *(public service, national) or* Aktuellt *(public service, national) or* Nyheterna *(commercial, TV4, national), at least 5 days/week. Public service TV news: Watching* Rapport *(public service, national) or* Aktuellt *(public service, national), at least 5 days/week. Radio news: Listening to* Ekot *(public service national news) or news in private radio at least 5 days/week. Public service radio news: Listening to* Ekot *(public service national news) at least 5 days/week. Tabloid papers: Reading* Aftonbladet/Expressen/GT/Kvällsposten *(evening tabloid papers) in print or online at least 6–7 days/week.*

news in the new commercial channel TV4 were added to the survey from 1991, the total TV news consumption increased. It has since been hovering around 60 percent watching TV news at least 5 days/week. From 2006, there appears however to be a slight decline in the consumption of TV news.

The line showing radio news consumption displays an irregular pattern, with some noticeable shifts. With respect to public service radio, throughout the period between 22 and 32 percent of the population listened to their news shows at least 5 days/week, but there is no continuous trend. Private radio was introduced in the early 1990s, and when questions about the consumption of news in private radio were added to the survey in 1998, radio listening took

a huge jump. Since the late 1990s, listening has however been declining slowly.

Until 2007, when questions about online reading of tabloid news were added to the surveys, the reading of print tabloids declined continuously. The rapid expansion and popularity of the websites of the tabloids (particularly *Aftonbladet*) had a clear impact on news media use, however, and the share reading a tabloid has been increasing since 2007.

To summarize, when patterns of different types of news media use are examined over the period 1986–2010, findings indicate that newspaper reading is declining slowly, tabloid reading is increasing after many years of decline, whereas the consumption of television and radio news is displaying less of a continuous trend. In the case of both morning newspaper and tabloid reading, increasing readership of their online versions has counteracted and offset some of the decline in readership of the print versions.

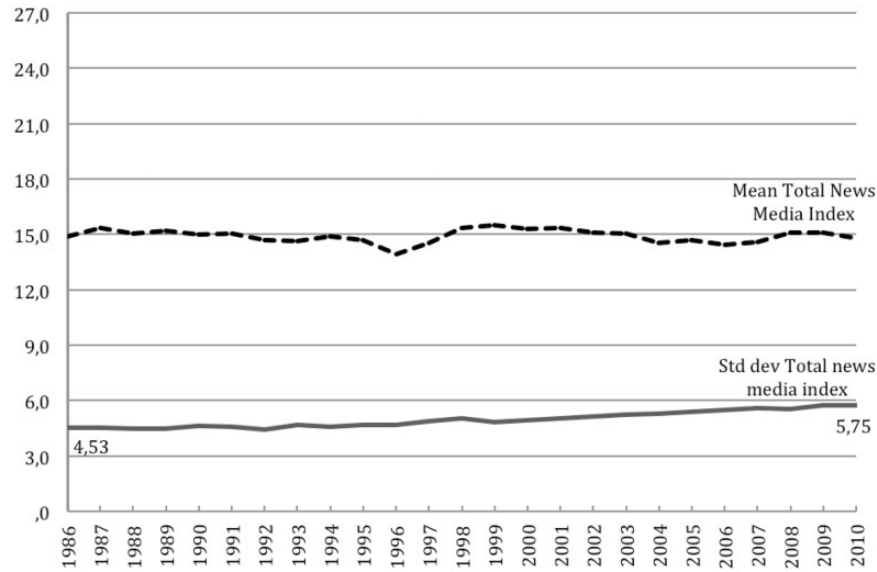
However, when the TNMU is examined by the use of the TNMU-index, the mean level of the TNMU proves to be remarkably stable across time (Figure 2). When all types of news media use are taken into consideration simultaneously, there are virtually no signs of a continuous increase or decrease, or of sudden shifts in the level of TNMU.

Focusing on aggregate trends may hide underlying changes, however. And in fact, although the mean level of media consumption remains more or less constant across the past 25 years, a closer analysis reveals that there are some important changes across time. Most importantly, there is an increasing variation among the population with respect to the level of their news media use. This is shown by the lower graph in Figure 2, displaying the increasing variability in the total level of news media use (TNMU) by using the standard deviation of the index as an indicator of the amount of variation. As can be seen, over time there are indeed increasing differences across individuals.

The fact that there is an increasing variability across time suggests that changes in media environments may, as hypothesized, have affected the influence of individual-level factors such as political interest. Important to note is also that the construction of the TNMU-index aims at capturing the extent of an individual's exposure to news with respect to all four media categories. Hence, the construction of the index *does not* presume a high correlation between the usages of different media. Instead, the individual's pattern of news media use may vary so that some seek out all sorts of news (news-seekers), some avoid all news (news-avoiders), while others choose different combinations of news media in their media repertoire.

According to theory, changes in media environments have affected the influence of individual-level factors such as political interest on news media use. As media choices and the opportunities increase, motivations and abilities

Figure 2
Longitudinal development of total news media use (mean of Total media use index, 0–27) and the variability in news media use (standard deviations of Total news media use index), 1986–2010.

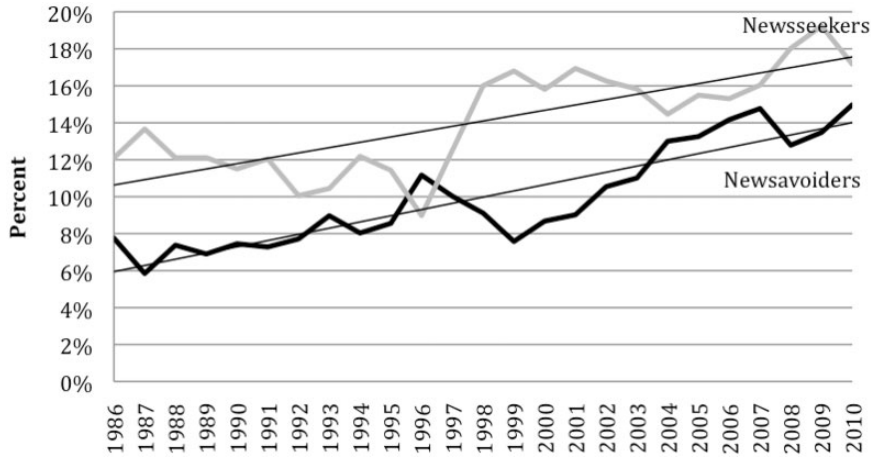


Note*: Total news media use index = (TV news + radio news + newspapers online/print + tabloid papers online/print). Newspapers: Reading at least one newspaper (morning papers, mainly subscribed) in print or online, 0—"never/less frequently", 1—1 day/week, 2—2 days/week, 3—3 days/week, 4—4 days/week, 5—5 days/week, 6—6 days/week, 7—7 days/week. TV news: Watching* Rapport *(public service, national) or* Aktuellt *(public service, national) or* Nyheterna *(commercial, TV4, national), 0—never, 1—less frequently, 2—1–2 days/week, 3—3–4 days/week, 5—5–6 days/week, 7—daily. Radio news: Listening to* Ekot *(public service national news) or news in private radio, 0—never, 1— less frequently, 2—1–2 days/week, 3—3–4 days/week, 5—5–6 days/week, 7—daily. Tabloid papers: Reading* Aftonbladet/Expressen/GT/Kvällsposten *(evening tabloid papers) in print or online, 0—never, 1—less frequently, 2—1–2 days/week, 4—3–4 days/week, 6—6–7 days/week.*

become more important (Luskin, 1990; Prior, 2007). Those who are highly interested in news increasingly tune in, while those who are less interested increasingly tune out. If this holds true, the share of both news-seekers and news-avoiders should increase across time.

To investigate this and test out the first hypothesis, we classified people as either news-avoiders (TNMU-index < 9) or news-seekers (TNMU-index > 20), and compared how the share of these groups changed across time. The results are presented in Figure 3, showing that both groups are indeed increasing in size between 1986 and 2010, thus supporting H1. Hence, while on an aggregate level of analysis there does not appear to be many changes across time, on a disaggregated level the results show both increasing

Figure 3
News-seekers and news-avoiders in the population, 1986–2010 (percent).



Note*: News-seekers: Total news media use index >20. News-avoiders: Total news media use index < 9. The Total news media use index varies between 0 and 27.*

variability between individuals and that the groups of news-seekers as well as news-avoiders have increased in size across time.

While the evidence thus far appears to support the claim that changes in media environments have affected the influence of individual-level motivational factors such as political interest on news media use, these results are only suggestive. The next step is to add the independent variables and test our second hypothesis by examining the effects of political interest on news media use. The index of TNMU is subsequently used as the main dependent variable, but the effects of political interest are also—in the following steps—estimated for all the different news media types included in the study: morning newspapers (in print only, as well as in print or online); television news (public service television and/or TV4/private); radio news (public service radio news and/or news in private radio); and tabloid newspapers (in print or online).

To reiterate, H2 predicted that the impact of political interest on overall news media use would increase over time, even after controlling for other factors that may have an impact on news media use. To investigate this, stepwise OLS regression analyses were run, using the TNMU-index (scale 0–27) as the dependent variable.

Table 1 shows the results. In Model 1, the effect of political interest on TNMU is tested without any control variables. The results support the hypothesis that TNMU is positively associated with the level of political interest: the higher the level of political interest, the higher the level of TNMU. The

Table 1
Effects of Political Interest, Gender, Education, and Age on Total News Media Use 1986–2010 (Index 0–27) (OLS, Unstandardized Regression Coefficients)

	News media use index					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Interest in politics (ref = not at all interested)	All***	All***	All***	All***	All***	All***
Hardly interested	2.3*** (0.08)	2.3*** (0.08)	2.3*** (0.08)	1.7*** (0.08)	1.7*** (0.08)	0.9*** (0.18) (1)
Quite interested in politics	4.0*** (0.08)	4.2*** (0.08)	4.2*** (0.08)	3.0*** (0.08)	3.0*** (0.08)	2.0*** (0.18) (2)
Very interested in politics	5.1*** (0.10)	5.4*** (0.10)	5.3*** (0.10)	4.0*** (0.09)	3.9*** (0.09)	2.8*** (0.22) (3)
Education (ref = Low)		All***	All***	All***	All***	All***
Medium		−1.1*** (0.05)	−1.1*** (0.05)	0.4*** (0.05)	0.4*** (0.05)	0.4*** (0.05)
High		−1.4*** (0.06)	−1.4*** (0.06)	0.1 (N.S) (0.06)	0.2** (0.06)	0.2** (0.06)
Gender (ref = female)						
Male			0.2*** (0.04)	0.2*** (0.04)	0.2*** (0.04)	0.3*** (0.04)
Age (16–75)				0.1*** (0.00)	0.1*** (0.00)	0.1*** (0.00)
Time (0–24: 1986 = 0)					−0.03*** (0.00)	−0.08*** (0.01)
Interaction (time × political interest)						All***
Hardly interested × time						0.05*** (0.01) (4)
Quite interested × time						0.07*** (0.01) (5)
Very interested × time						0.08*** (0.01) (6)
Constant	11.9*** (0.07)	12.4*** (0.10)	12.4*** (0.10)	7.5*** (0.11)	7.8*** (0.12)	9.0*** (0.19)
n =	59,078	59,078	59,078	59,078	59,078	59,078
Adj R^2	.07***	.08***	.08***	.16***	.17***	.17***

Notes. **$p < 0.01$, ***$p < 0.001$. Total news media use index (scale: 0–27) = Newspapers print/online (0–7) + Tabloid press print/online (0–6) + TV news (0–7) + radio news (0–7). Interaction = Political interest*time. Education: Low: primary education; Medium: secondary education; High: college/university. Collinearity VIF > 4; (1) 21.4, (2) 21.9, (3) 12.7, (4) 22.7, (5) 23.5, (6) 12.7. "All" indicates the significance of the full set of dummy variables.

adjusted R^2 indicates that about 7% of the variation in TNMU can be attributed to variations in political interest. The predicted value of the total news media index for an individual who is "not at all interested in politics" is 11.9 (the reference category, represented by the constant in the model) on the 27-point scale. An individual who is "quite interested in politics" would score 15.9, while a person who is "very interested in politics" is estimated to score 17.0.

The control variables education, gender, and age are added to the analysis in Models 2–4. The results show that the effect of political interest does not change very much when education and gender are added as control variables. Instead, the addition of these variables to the model increases the explanative power significantly ($p < .000$) while also *increasing* the effect of political interest somewhat. When age is added in Model 4, the effect of political interest is however reduced, while the adjusted R^2 increases from 0.08*** to .16***. Taken together, these results indicate that (a) political interest is an important explanatory factor to news media use even when education, gender, and age are controlled for, and (b) while political interest is related to age, it also has a substantial unique effect on the TNMU.

In Model 5 "time" is added as a control variable, and the addition of this factor improves the model by displaying a significant ($p < .001$), negative effect on the TNMU. In other words, when all the other variables are controlled for, there is a small but significant decrease in the overall level of news media use over time.

Finally, when interaction terms are added in Model 6, R^2 increases to .17***. The interaction terms are significant ($p < .001$), both individually and as a set. The coefficients of the interactions are furthermore positive, indicating that political interest interacts positively with time in a way that contributes to an increase in the TNMU, above and beyond the individual effects of political interest and time.

In other words, the results show that the difference in TNMU between an individual with low or no political interest and an individual with high political interest has increased between 1986 and 2010, *ceteris paribus.* This result provides support for our hypothesis that the effect of political interest on TNMU *does increase over time*.

Continuing with H3, this hypothesis predicted that the impact of political interest on news media use would increase over time for all media types. To test H3, the same regression models were subsequently applied separately for morning newspaper reading, watching television news, listening to radio news, and reading tabloids. Since the scales of the media use variables differ, standardized coefficients are used to facilitate comparisons.

Table 2 shows the results in terms of the final models, that is, the models that include all independent variables. Table 2 shows that the same pattern

Table 2
Effects of Political Interest, Gender, Education, Age and Time on Different Categories of Total News Media Use, 1986–2010 (OLS, Standardized Regression Coefficients)

	Newspapers print only	Newspapers print or online	Television news	Radio news	Public service television news	Public service radio news	Tabloid papers print or online
Interest in politics	All***	All***	All***	All***	All***	All***	All*
(ref = not at all interested)							
Hardly interested	.04*	.06**	.06***	.05**	.06***	.05* (ns)	.03
Quite interested in politics	.05**	.07***	.12***	.16***	.12***	.15***	.06**
Very interested in politics	.04**	.05**	.12***	.15***	.10***	.14***	.05**
Education (ref = Low)	All***	All***	All***	All***	All***	All***	All***
Medium	.07***	.07***	−.04***	.08***	−.02***	.09***	−.03***
High	.12***	.13***	−.08***	.10***	−.02**	.13***	−.17***
Gender (ref = female)							
Male	−.02***	−.02***	−.04***	.06***	.01*	.07***	.05***
Age (16–75)	.28***	.26***	.41***	.14***	.48***	.18***	−.10***
Time (0–24: 1986 = 0)	−.23***	−.16***	−.08***	−.00 (ns)	−.12***	−.10***	.00 (ns)
Interaction (time × political interest)	All***	All***	All***	All*	All***	All**	All (ns)
Hardly interested × time	.07***	.04*	.06**	.05*	.08***	.05**	.02
Quite interested × time	.12***	.10***	.11***	.03 (ns)	.15***	.07***	.02
Very interested × time	.08***	.08***	.06***	.01 (ns)	.11***	.05***	.02
n =	59,078	59,078	59,078	59,078	59,078	59,078	59,078
Adj R^2	.11***	.09***	.23***	.06***	.30***	.08***	.03***

Notes: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, ns = not significant. Newspapers print/online (0–7); tabloid press print/online (0–6); TV news (0–7), public service TV news (0–7); radio news (0–7); public service radio news (0–7). Education: Low—primary education; medium—secondary education; high–college/university. Interaction = Political interest*time. "All" indicates the significance of the combined set of dummy variables.

Table 3
Effects of Political Interest, Gender, Education and Age on Total News Media Use (Index 0–27), in 5-Year Periods (OLS Regression, Unstandardized Regression Coefficients) 1986–2010.

	Period 1986–1990			Period 1991–1995			Period 1996–2000			Period 2001–2005			Period 2006–2010		
	Model1a	Model2a	Model3a	Model1b	Model2b	Model3b	Model1c	Model2c	Model3c	Model1d	Model2d	Model3d	Model1e	Model2e	Model3e
Interest in politics (ref = not at all interested)															
Hardly interested	1.6***		1.4***	1.6***		1.3***	2.2***		1.7***	2.1***		1.5***	2.9***		1.9***
	(0.22)		(0.21)	(0.20)		(0.20)	(0.17)		(0.16)	(0.15)		(0.14)	(0.16)		(0.14)
Quite interested in politics	3.2***		2.6***	3.5***		2.9***	3.6***		2.8***	3.9***		2.8***	4.8***		3.3***
	(0.22)		(0.22)	(0.20)		(0.20)	(0.16)		(0.16)	(0.15)		(0.15)	(0.15)		(0.15)
Very interested in politics	4.4***		3.7***	4.7***		3.9***	4.7***		3.7***	4.7***		3.7***	5.9***		4.3***
	(0.27)		(0.27)	(.24)		(0.24)	(0.20)		(0.20)	(0.19)		(0.18)	(0.18)		(0.18)
Education (ref = Low)															
Medium		0.5***	0.3		0.6***	0.3*		0.5***	0.2*		0.6***	0.3*		1.2***	0.8***
		(0.14)	(0.14)		(0.12)	(0.12)		(0.11)	(0.11)		(0.11)	(0.11)		(0.11)	(0.11)
High		0.9***	0.1		1.0***	0.2		0.7***	−0.1		0.7***	−0.1		1.6***	0.7***
		(0.17)	(0.18)		(0.15)	(0.15)		(0.12)	(0.12)		(0.11)	(0.12)		(0.12)	(0.12)
Gender (ref = female)															
Male		0.7***	0.3*		0.6***	0.2*		0.5***	0.2**		0.5***	0.2*		0.6***	0.3***
		(0.11)	(0.11)		(0.10)	(0.10)		(0.09)	(0.08)		(0.08)	(0.08)		(0.08)	(0.08)
Age (16–75)		0.1***	0.1***		0.1***	0.1***		0.1***	0.1***		0.1***	0.1***		0.1***	0.1***
		(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)		(0.00)	(0.00)
Constant	12.7***	15.4***	9.8***	12.1***	9.8***	9.1***	12.3***	9.2***	8.4***	12.1***	8.2***	7.6***	11.1***	5.7***	4.9***
	(0.20)	(0.27)	(0.31)	(0.19)	(0.24)	(0.28)	(0.15)	(0.21)	(0.24)	(0.14)	(0.20)	(0.23)	(0.14)	(0.21)	(0.23)
n =	5958	5958	5958	7822	7822	7822	12,468	12,468	12,468	15,525	15,525	15,525	17,305	17,305	17,305
Adj R^2	0.06***	0.08***	.12***	.08***	.08***	.13***	.06***	.12***	.15***	.06***	.14***	.17***	0.08***	.18***	.21***
Variability (mean/std dev) of news media use	Mean = 15.1 Std. Dev. = 4.5			Mean = 14.8 Std. Dev. = 4.6			Mean = 15.2 Std. Dev. = 4.9			Mean = 15.0 Std. Dev. = 5.2			Mean = 14.9 Std. Dev. = 5.6		

Notes: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Total news media use index (scale: 0–27) = Newspapers print/online (0–7) + Tabloid press print/online (0–6) + TV news (0–7) + radio news (0–7).

that was found previously with respect to the effects of political interest on *total* media use is present also when different types of news media use are examined individually. Interest in politics, education, gender, age, and time all display significant effects on all types of news media use, after controlling for all the other variables in the model. Also, the interaction terms are significant, both individually and as a set, for all the types of news media except for tabloid newspaper consumption. The reading of tabloids (in print or online) is increased by an interest in politics, by being male and younger, and by having a lower level of education. However, there is no significant effect of time and no significant interaction effect.

Taken together and to answer RQ1, the results show that the increasing effect of political interest is observable with regard to all types of news media use, with a partial exception of tabloids. The pattern is clearly evident for morning newspaper reading (print or online), television news viewing, and listening to news in public service radio, but weaker or not significant for total news radio listening and reading tabloid newspapers. Nevertheless, overall the results support H3.

Finally, and as an additional test of our hypothesis that the impact of political interest on news media use will increase over time, we ran separate models for each period of time. Five regression models are compared, each representing one 5-year period: from the first period 1986–1990 to the most recent period 2006–2010. The dependent variable is the TNMU-index.

The results in Table 3 Model 1a-e show a systematic pattern of progressively larger coefficients. More specifically, the results show that an individual who is very interested in politics would score higher on the TNMU-index in 2006–2010 than in earlier periods, compared to an individual who is not at all interested in politics. The same pattern of increasing coefficients is present also for those who are hardly interested and quite interested in politics. This confirms our earlier finding that the effect of political interest on news media use increases over time, and that the effect is increasing for all levels of political interest.

In Model 3a–e the full regression model, with all independent variables included, is tested for all five periods. The sample size becomes larger and the variation in the dependent variable (TNMU) increases over time, thus disallowing for a direct comparison of the explanative power of the different models. Nevertheless, a general observation is that R^2 increases continuously when the models are compared: from .12 in 1986–1990 to .21 in 2006–2010. As the variation in news media use amplify over time, this shows that political interest, education, gender, and age are gradually becoming more helpful in predicting an individual's news media use. The effects of education and political interest also take leaps in the last period, indicating changes that amplify and accelerate the general trend toward increasing divergence among social groups with respect to their news media use.

Overall, the results of our analyses suggest that political interest has indeed become more important as a predictor of news media use across time. Both the effect and the explanatory value of political interest have increased over time, both for overall news media use and for all media types except the tabloids. It is not the case that those who lack political interest avoid news altogether, whereas the very politically interested follow all the news all the time, but media environmental factors do moderate the influence of individual level factors. Individual motivation in the form of political interest does have a significantly stronger impact on people's news media use today than before.

Discussion and Conclusions

The purpose of this study has been to investigate the impact of political interest on news media use across time, by analyzing (a) how changes in the media environment have affected the share of news-seekers and news-avoiders, (b) if the impact of political interest on TNMU has become stronger across time, and (c) if the impact of political interest on news media use has become stronger for *different media types* across time. In all three cases, our results show that the answer is affirmative.

These results are particularly noteworthy considering that Sweden constitutes a tough case to test the hypothesis of increasing impact of political interest on news media use. Compared to the United States, where the hypothesis of changing impact of individual-level factors such as political interest due to media environmental changes was first tested (Prior, 2005, 2007), Sweden constitutes a different case in terms of their model of media and politics (Hallin & Mancini, 2004). More importantly, overall news media consumption has been high and rather stable across the years; media choices have not been as great or increased as much; and homogeneity in media use patterns has always been greater in Sweden than in the United States. Still, the same pattern of results can be found in both the countries.

The key mechanism appears to be the combination of opportunity and motivation, as suggested by the OMA framework (Cooper & Tang, 2009; Delli Carpini & Keeter, 1996; Luskin, 1990; Prior, 2007). Increasing media choices mean that people's opportunities to choose differently and in line with their preferences increase, which means that the role of individual motivations becomes more important. One of the key individual motivations in this context is political interest. When media choices were limited, politically interested as well as politically less interested tended to follow the news. When media choices increase, the politically interested continue to follow the news or increase their news consumption, while the politically less interested are more likely to tune out.

If this holds true and extending the results of this study, the impact of political interest on news media use should have increased not only in the

United States and Sweden but also in all advanced democracies where media environments have changed in the direction of increasing media choices. Furthermore, the impact of political interest on news media use is likely to become even stronger as media choices continue to increase.

Although establishing the chain of causality is always difficult, this process of voluntary segmentation might result in widening knowledge and participation gaps between the politically interested and less interested, given the crucial role of personal motivations in this regard (Eveland, Shah, & Kwak, 2003; Kwak, 1999). The groups of news-seekers and news-avoiders will become larger and the differences between them will become greater. This will likely, in turn, result in increasing differences in levels of political knowledge and participation. Differences in political interest may thus have both an indirect—mediated by news media use—and a direct effect on political knowledge and participation. Currently, however, it is worth stressing that while these trends seem to apply to very diverse countries, recent cross-national research has shown that gaps in knowledge between citizens with different levels of interests tend to be smaller in public service-oriented media systems than in market-based systems (Curran et al, 2009; Iyengar et al., 2010). Furthermore, while the cross-national study by Blekesaune et al. (2012) revealed similar trend patterns across Europe with respect to increasing shares of "disconnected citizens"—or news-avoiders—the study documented significant variations between media systems as well, concluding that "tuning out is a function both of the individual trait of the citizen, but also a function of the supply of news in particular media systems" (Blekesaune et al., 2012, p. 123). These findings highlight the importance of investigating both the interactive relationship between opportunities provided by the media environment and the motivations to seek out news among citizens, as well as the contingencies that either strengthen or constrain what appear to be universal societal trends.

References

Althaus, S. L., Cizmar, A. M., & Gimpel, J. G. (2009). Media supply, audience demand, and the geography of news consumption in the United States. *Political Communication, 26*(3), 249–277. Doi: 10.1080/10584600903053361.

Bennett, W. L., & Iyengar, S. (2008). A new era of minimal effects? The changing foundations of political communication. *Journal of Communication, 58*(4), 707–731. Doi: 10.1111/j.1460-2466.2008.00410.x.

Bennett, S. E., Rhine, S. L., & Flickinger, R. S. (2000). Reading's impact on democratic citizenship in America. *Political Behavior, 22*(3), 167–195. Doi: 10.1023/A:1026616029255.

Best, S. J., & Krueger, B. S. (2005). Analyzing the representativeness of Internet political participation. *Political Behavior, 27*(2), 183–216. Doi: 10.1007/s11109-005-3242-y.

Blekesaune, A., Elvestad, E., & Aalberg, T. (2012). Tuning out the world of news and current affairs: An empirical study of Europe's disconnected citizens. *European Sociological Review, 28*(1), 110–126. Doi: 10.1093/esr/jcq051.

Boulianne, S. (2009). Does Internet use affect engagement? A meta-analysis of research. *Political Communication, 26*(2), 249–277. Doi: 10.1080/10584600902854363.

Boulianne, S. (2011). Stimulating or reinforcing political interest: Using panel data to examine reciprocal effects between news media and political interest. *Political Communication, 28*(2), 147–162. Doi: 10.1080/10584609.2010.540305.

Carlsson, U. (Ed.) (2011). *Nordicom-Sveriges mediebarometer 2010*. Göteborg: Nordicom-Sverige.

Cooper, R., & Tang, T. (2009). Predicting audience exposure to television in today's media environment: An empirical integration of active-audience and structural theories. *Journal of Broadcasting & Electronic Media, 53*(3), 400–418. Doi: 10.1080/08838150903102204.

Curran, J., Iyengar, S., Lund, A. B., & Salovara-Moring, I. (2009). Media system, public knowledge and democracy: A comparative study. *European Journal of Communication, 24*(5), 5–26.

David, C. C. (2009). Learning political information from the news: A closer look at the role of motivation. *Journal of Communication, 59*(2), 243–261. Doi: 10.1177/0267323108098943.

Delli Carpini, M. X. (2004). Mediating democratic engagement: The impact of communications on citizens' involvement in political and civic Life. In L. L. Kaid (Ed.), *Handbook of political communication research*. Mahwah: Lawrence Erlbaum.

Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven: Yale University Press.

Delli Carpini, M. X., Keeter, S., & Kennamer, J. D. (1994). Effect of the news media environment on citizen knowledge on state politics and government. *Journalism Quarterly, 71*(2), 443–456. Doi: 10.1177/107769909407100217.

Djerf-Pierre, M., & Weibull, L. (2001). *Spegla, granska, tolka. Aktualitetsjournalistik i svensk radio och TV under 1900-talet*. Stockholm: Prisma.

Drew, D., & Weaver, D. (2006). Voter learning in the 2004 presidential election: Did the media matter? *Journalism & Mass Communication Quarterly, 83*(1), 25–42. Doi: 10.1177/107769900608300103.

Elvestad, E., & Blekesaune, A. (2008). Newspaper readers in Europe: A multilevel study of individual and national differences. *European Journal of Communication, 23*(4), 425–447. Doi: 10.1177/0267323108096993.

Eveland, W. P., Shah, D. V., & Kwak, N. (2003). Assessing causality in the cognitive mediation model: A panel study of motivations, information processing, and learning during campaign 2000. *Communication Research, 30*, 359–386. Doi: 10.1177/0093650203253369.

Hallin, D. C., & Mancini, P. (2004). *Comparing Media Systems. Three Models of Media and Politics*. New York: Cambridge University Press.

Holbert, R. L., Garrett, R. K., & Gleason, L. S. (2010). A new era of minimal effects? A response to Bennett and Iyengar. *Journal of Communication, 60*(1), 15–34.

Iyengar, S., Curran, J., Lund, A. B., Salovaara-Moring, I., Hahn, K. S., & Coen, S. (2010). Cross-national versus individual-level differences in political information: A

media systems perspective. *Journal of Elections, Public Opinion & Parties, 20*(3), 291–309. Doi: 10.1111/j.1460-2466.2009.01470.x.

Ksiazek, T. B., Malthouse, E. C., & Webster, J. G. (2010). News-seekers and news-avoiders: Exploring patterns of total news consumption across media and the relationship to civic participation. *Journal of Broadcasting & Electronic Media, 54*(4), 551–568. Doi: 10.1080/08838151.2010.519808.

Kwak, N. (1999). Revisiting the knowledge gap hypothesis: Education, motivation, and media use. *Communication Research, 26*, 385–413. Doi: 10.1177/009365099026004002.

Luskin, R. C. (1990). Explaining political sophistication. *Political Behavior, 12*(4), 331–361. Doi: 10.1007/BF00992793.

Min, S.-J. (2010). From the digital divide to the democratic divide: Internet skills, political interest, and the second-level digital divide in political internet use. *Journal of Information Technology & Politics, 7*(1), 22–35. Doi: 10.1080/19331680903109402.

Nilsson, Å., & Vernersdotter, F. (2011). Den nationella SOM-undersökningen 2010. In S. Holmberg, L. Weibull & H. Oscarsson (Eds.), *Lycksalighetens ö* (pp. 551–583). Göteborg: The SOM Institute/University of Gothenburg.

Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. New York: Cambridge University Press.

Prior, M. (2005). News vs. entertainment: How increasing media choice widens gaps in political knowledge and turnout. *American Journal of Political Science, 49*(3), 577–592. Doi: 10.1111/j.1540-5907.2005.00143.x.

Prior, M. (2007). *Post-broadcast democracy: How media choice increases inequality in political involvement and polarizes elections*. New York: Cambridge University Press.

Prior, M. (2010). You've either got it or you don't? The stability of political interest over the life cycle. *Journal of Politics, 72*(3), 747–766. Doi: 10.1017/S0022381610000149.

Shehata, A., & Strömbäck, J. (2011). A matter of context: A comparative study of media environments and news consumption gaps in Europe. *Political Communication, 28*(1), 110–134. Doi: 10.1080/10584609.2010.543006.

Sternvik, J., & Wadbring, I. (2010). Nyhetsvanor: en klassfråga?. In M. Oskarsson, M. Bengtsson & T. Berglund (Eds.), *En fråga om klass – levnadsförhållanden, livsstil och politik* (pp. 148–159). Malmö: Liber.

Strömbäck, J., & Shehata, A. (2010). Media malaise or a virtuous circle? Exploring the causal relationships between news media exposure, political news attention and political interest. *European Journal of Political Research, 49*(5), 575–597. Doi: 10.1111/j.1475-6765.2009.01913.x.

Stroud, N. J. (2011). *Niche News. The politics of news choice*. New York: Oxford University Press.

Weibull, L. (2005). Sverige i tidningsvärlden. In A. Bergström, I. Wadbring & L. Weibull (Eds.), *Nypressat. Ett kvartssekel med svenska dagstidningsläsare* (pp. 19–48). Göteborg: JMG/Göteborgs universitet.

Wonneberger, A., Schoenbach, K., & van Meurs, L. (2011). Interest in news and politics – or situational determinants. *Journal of Broadcasting & Electronic Media, 55*(3), 325–343. Doi: 10.1080/08838151.2011.59746.

Biographical Notes

Jesper Strömbäck is professor in political communication and Ludvig Nordström professor and chair in journalism at the Department of Media and Communication at Mid Sweden University. His research focuses on political communication.

Monika Djerf-Pierre is Professor at the Department of Journalism, Media and Communication at the University of Gothenburg, Sweden. Her research focuses on journalism, media history, political communication, crisis communication, and gender studies.

Adam Shehata is assistant professor in media and communication at the Department of Media and Communication at Mid Sweden University. His research focuses on media use and effects.