EJC

Full Length Article

The X Factor of opportunity structures: How grab and wrap effects of entertainment create inadvertent news audience in a high-choice media environment

Kim Andersen (iD)
University of Southern Denmark, Denmark; University of Gothenburg, Sweden

Morten Skovsgaard
University of Southern Denmark, Denmark

Rasmus T. Pedersen
VIVE – The Danish Center for Social Science Research, Denmark

Abstract

In today's high-choice media environments, newscasts increasingly compete for viewers against multiple entertainment options. This development has led to concerns over the demise of inadvertent news audiences, which is especially problematic for public service broadcasters who have an obligation to provide news to all segments of the population. However, this study demonstrates how entertainment shows can be used to create a favourable opportunity structure that generates substantial inadvertent news audiences. Using Danish TV meter data from 2008 to 2016, we show that scheduling the music talent show *The X Factor* before and after the newscast on the main public service channel increased news audiences dramatically. These 'grab' and 'wrap' effects of entertainment were particularly strong among young people and people with low news interest, and the effects became even stronger over time. Consequently, entertainment shows, indirectly, play a positive democratic role, by increasing the viewership of newscasts.

Keywords

Entertainment, inadvertent audience, incidental exposure, news, public service broadcasting

Corresponding author:
Kim Andersen, Centre for Journalism, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark.
Email: kand@journalism.sdu.dk

In modern democracies, the news media play a key role in providing citizens with information about political and societal issues (Strömbäck, 2005). This is especially the case for public service media who, in contrast to market-oriented media, have an obligation to provide all parts of the population with quality news (e.g. Curran et al., 2009; Strömbäck, 2017). The nature of today's media environment makes it difficult for them to fulfil this obligation, however. An increasing number of citizens are now turning their backs to the news, compared with earlier times when limited media choice led a substantial share of viewers to watch news inadvertently as a by-product of watching television for entertainment purposes (e.g. Bennett and Iyengar, 2008; Prior, 2005, 2007)

This development has led scholars to suggest the 'demise of the inadvertent audience' and thereby also the demise of television's levelling effect on gaps in news exposure and political knowledge between the most and least motivated (Iyengar, 2017). Such a suggestion supports the argument that public service media should focus exclusively on content that would not be supplied in a non-regulated market. If the inadvertent news audiences generated by entertainment content disappear, the rationale for having such content on public service channels also evaporates. Such a claim calls for empirical explorations of the potential for inadvertent news audiences in today's high-choice media environment and its sustainability over time.

We argue that even in today's high-choice media environment, the right opportunity structures can generate and sustain substantial inadvertent audiences. Previous studies of opportunity structures for news exposure have mainly focussed on the availability, frequency and timing of news (e.g. Aalberg et al., 2010; Curran et al., 2009; Esser et al., 2012; Iyengar et al., 2010). Instead, we focus on the opportunity structure generated by the composition of the programming schedule. Based on the concept of lead-in and lead-out effects (Wonneberger et al., 2011), we argue that popular entertainment shows before the news will still attract people and thereby increase the inadvertent news audience through a 'grab effect'. Furthermore, if the entertainment shows are scheduled both before and after the news broadcast, the inadvertent audience will increase even more due to a 'wrap effect'.

Using Gallup TV meter data, we test the efficacy of these effects on the case of the music talent show *The X Factor*. From 2008 to 2018, this popular show was broadcasted on the main channel of the public service broadcaster in Denmark (*DR1*) in the same Friday night time slots. The show ran immediately before the main evening news broadcast (*TV-Avisen*) in the first half of each season, and it aired both immediately before and after the news broadcast in the last half of each season. The chance to compare shares of the population watching the news broadcast on Fridays without *The X Factor*, Fridays with *The X Factor* before and Fridays with *The X Factor* both before and after the news broadcast makes our data perfectly suited for testing the 'grab' and 'wrap' effects. Furthermore, the consistency in the scheduling of *The X Factor* over the years allows us to explore whether inadvertent news audiences decrease over time in the face of increasing media choice.

Our analysis clearly confirms that the broadcasting of *The X Factor* increased news audiences, particularly among younger people and people with a low level of interest in news. In addition, these effects became stronger rather than weaker over the period under investigation. Thereby, our study shows that even though competition from entertainment may draw people away from the news, popular entertainment can also be key in creating

opportunity structures conducive to inadvertent news exposure. These findings are not only a contribution to the scholarly debate on opportunity structures for inadvertent news audiences but they also feed into the debate on public service media that currently takes place in many European countries. In Denmark, for example, *The X Factor* has been the prime example of an entertainment show, which critics have argued should not be aired by the public service broadcaster. This study provides important nuances to this debate by illustrating the show's potential for generating inadvertent news audiences.

Inadvertent audiences in low- and high-choice media environments

News exposure is to some degree a function of demand, and individual-level personal interest in news and politics is accordingly a well-established predictor of news exposure (e.g. David, 2009; Strömbäck et al., 2013; Strömbäck and Shehata, 2010). However, the supply of content by the media environment is also an important factor for news exposure (e.g. Althaus et al., 2009; Prior, 2007; Strömbäck et al., 2013). A diverse supply of different types of content makes it easier for any individual to select the media content that he or she wants and avoid media content that they are not motivated to consume (Prior, 2007; Skovsgaard et al., 2016). In other words, the media environment and the media content on offer condition the effect that personal motivations have on media exposure.

In past time's low-choice media environment, the impact of personal motivations on news exposure was limited. People were likely to encounter news even if they had limited interest in politics and current affairs because it took more effort to avoid it. Television, in particular, has been argued to be conducive to inadvertent news audiences. Blumler (1970) termed television a non-selective medium that was omnipresent, entertaining and could be consumed leisurely. When people had decided to watch television in a situation of limited media choice, they would often stick to the chosen channel even if a news programme was part of the schedule. While people with a high preference for news watched news out of pure interest, others with a low preference for news watched news as a by-product of watching television for entertainment (Bennett and Iyengar, 2008; Diddi and LaRose, 2006; LaRose, 2010; Prior, 2005; Wonneberger et al., 2011). Even such incidental exposure to news produces learning and makes individuals with a limited interest in news more knowledgeable about politics and current affairs, thus decreasing the knowledge gap between the most and the least interested (Curran et al., 2009; Krugman and Hartley, 1970; Shehata, 2013; Shehata et al., 2015; Zukin and Snyder, 1984). This knowledge acquisition among the least interested has been termed the 'trap effect' because these people are inadvertently 'trapped' to learn through unintended exposure to news (Schönbach & Lauf, 2002, 2004).

However, in recent decades, the media environment has changed dramatically, with an explosion of the amount of content to choose from. This explosion has been driven both by the proliferation of television channels and by the rapid rise of the Internet (Van Aelst et al., 2017). Together with new technological devices such as personal computers and smartphones, the increasing supply of different types of content has made it easier than ever before for individuals to choose content in line with their personal preferences (e.g. Arceneaux and Johnson, 2013; Prior, 2007). In a high-choice environment, people

with high interest in politics can choose to consume even more news than before, while individuals with a low interest in politics can easily avoid the news altogether and turn towards more entertaining content (Prior, 2005, 2007) In line with this reasoning, longitudinal studies have found evidence of an increasing number of news avoiders over time as the supply of different types of media content, particularly entertainment, has grown (Blekesaune et al., 2012; Strömbäck et al., 2013).

Grab and wrap effects of favourable opportunity structures

While the increasing supply of entertainment has been argued to cause the demise of inadvertent audiences, we argue that entertainment also has the potential to counter this development when being scheduled directly before and after the newscast. Thereby, entertainment can be used to create favourable opportunity structures for news consumption. This potential has been noted, but not empirically analysed, by several of the studies that discuss the opportunity structures for news consumption in different media systems dominated by either public service or market-oriented media.

Esser et al. (2012) define opportunity structures as 'access points in the political information environment that provide incentives for people to enter the news discourse' (p. 249). In this perspective, news programmes are windows of opportunity where political information is available. Accordingly, the empirical investigation of such opportunity structure focusses on the volume, the distribution and the time slots of news across different countries. Aalberg et al. (2010) apply the same logic when comparing the availability of news and current affairs between the United States, dominated by market-oriented media, and five European countries, dominated by public service media. They conclude that

> [w]hen more time is devoted to news and current affairs in prime time, as in the European case, more people inadvertently watch the news because these are broadcast on the biggest TV channels at a time when most people actually watch television. (pp. 267–268)

It is a very reasonable notion that availability of news in the right time slots is an important factor in the opportunity structure for inadvertent audiences. As such, we do not dispute the relevance or conclusions of these existing studies. However, if opportunity structures are only seen as a question of availability of news, one could argue that a 24-hour news channel would offer the very best opportunity structure for news exposure. This might be so for people with a high news preference. However, generating inadvertent audiences among individuals with a low news preference requires that they watch the channel where the news is broadcasted for another reason, as they are unlikely to seek out a specific channel in order to consume the news.

It should be noted that while Esser et al. (2012) do not empirically investigate it, they do acknowledge that

> [f]avorable opportunity structures are determined not only by the sheer volume of information programs but also by their extensive distribution throughout the TV schedule, *their integrative placement between popular shows*, and their allocation to an attractive timeslot. Such a programming strategy offers the best chance of reaching and engaging 'inadvertent' audiences. (p. 250, our emphasis)

Similarly, Iyengar (2017) stresses the role of entertainment in creating opportunity structures conducive to inadvertent audiences (in the low-choice media environment of the past). As he writes,

> [a] significant component of the audience was uninterested in politics; it watched the news mainly to await the entertainment program that followed. Exposure to political information was driven not by political motivation, but rather by loyalty to a particular sitcom or other entertainment program. (p. 64)

Studies have also demonstrated that knowledge gaps between the most and the least motivated citizens are greater in the United States, dominated by market-oriented media, than in countries with strong public service broadcasting, that is, Finland and Denmark (Curran et al., 2009; Iyengar et al., 2010). They ascribed these smaller knowledge gaps to more favourable opportunity structures for inadvertent news audiences, including a better mix of entertainment and news in the public service broadcasters' programme scheduling.

While these studies indicate that the mix of entertainment and news plays a crucial role in generating inadvertent news audiences, they do not show it empirically. With the notion of 'the demise of the inadvertent audience', Iyengar (2017) even indicates that inadvertent news audiences are a phenomenon of the past. However, the idea that entertainment can still generate substantial inadvertent news audiences is supported by Wonneberger et al. (2011). They showed that situational factors such as watching preceding and subsequent programmes (lead-in and lead-out effects), co-viewing, and watching other television content than news are still stronger predictors of news exposure than individual motivations. Countering the notion that increasing media supply necessarily eliminates the potential for inadvertent audiences, Wonneberger et al. (2012) showed that situational factors did not lose ground to individual factors in predicting news exposure in the Netherlands from 1988 to 2010. In fact, their analysis showed that lead-in and lead-out effects became stronger predictors of watching news in the 23-year period when media supply increased significantly. Even though Wonneberger et al. (2011, 2012) did not focus on scheduling of entertainment programmes, their findings substantiate the notion that not only the volume, frequency and timing of news shows should be analysed when studying the opportunity structures for inadvertent audiences. It is crucial to also include the placement of broadly appealing entertainment programmes adjacent to news shows in the television schedule. Based on the notion that lead-in and lead-out effects are strong predictors of news exposure, a popular entertainment show placed before and after the newscast should generate substantial inadvertent audiences, even in today's high-choice media environment. Thus, we expect that

> H1: *Entertainment shows before newscasts increase audience numbers for the newscasts (the grab effect)*

> H2: *Entertainments shows before and after newscast*s *increase the audience numbers for newscasts (the wrap effect)*

In addition, we also expect that these grab (entertainment before) and wrap (entertainment before and after) effects are especially suited for drawing groups that are generally

news avoiders into the news. Studies of news avoiders have shown that the young, the low educated, and the ones with low interest in news and politics are the ones most like to turn their backs on the news (Blekesaune et al., 2012). Therefore, the potential for the grab and wrap effects may also be higher in these groups. Thus, we expect that

>   H3: *Grab and wrap effects are stronger among younger people compared to older people*

>   H4: *Grab and wrap effects are stronger among people with a lower education compared to people with a higher education*

>   H5: *Grab and wrap effects are stronger among people with lower interest in news compared to people with a higher interest in news*

Finally, we explore how these grab and wrap effects have developed in a period time with a drastic increase in the supply of media content on the Internet, social media and a growing number of television channels. On one hand, it can be argued that, faced with an increasing media supply, groups with the lowest motivation for watching news will increasingly select other media content (Bennett and Iyengar, 2008; Prior, 2007). As more media content and new platforms to access this content has become available, it has become easier to avoid news, and thus, we should expect that the grab and wrap effects become weaker over time. On the other hand, Wonneberger et al. (2011, 2012) show that lead-in and lead-out effects are important predictors of news exposure and that they become stronger rather than weaker over a period of time with growing supply of media content. Thus, rather than a directional hypothesis, we pose the following research question:

>   RQ1: *How have grab and wrap effects developed over time?*

Method

To test the importance of the grab and wrap effects of popular entertainment shows, we utilize data from a unique case. From 2008 to 2018, the Danish public service broadcaster *DR* broadcasted the music talent show *The X Factor* on their main channel (*DR1*) each Friday in the first 3–4 months of every year. *The X Factor* consists of two types of shows. The shows in the first half of a season are pre-recorded shows, while the later shows are live shows, where the artists compete against each other on stage. In the first half of each season, the pre-recorded shows were scheduled immediately before the main evening newscast (*TV-Avisen*). In the second half of the season, the live shows were also scheduled immediately before the evening newscast, while in a second part of the show after the newscast, the results of the competition were announced. By comparing the Fridays where *The X Factor* was scheduled only before or both before and after the newscast to Fridays without *The X Factor*, we are able to test and compare the grab and wrap effects of *The X Factor* on news watching. Furthermore, since *The X Factor* was scheduled in the same time slot and in the same months year after year, we are able to test the development of the grab and wrap effects over time in a period of dramatically increasing media supply.

Data

Not only does *The X Factor* provide us with a unique case for testing the grab and wrap effects over time. Our data also enable us to avoid self-reported news consumption measures from surveys, which have been shown to suffer from imprecise reporting and social desirability bias (Prior, 2009). We have 9 years of TV meter data from Kantar Gallup, starting from the first season of *The X Factor* in 2008 until the ninth season in 2016 (Kantar Gallup changed their measurement techniques in 2017, and we therefore restrict our analysis to the period before 2017). Other studies have also used this type of unobtrusive measurement for investigating TV-viewing behaviour (e.g. Wonneberger et al., 2011, 2012).

The TV meter data are collected from a panel consisting of approximately 2000–2500 individuals (see Table 2 in Appendix 1 for number of respondents across included groups). These individuals are continuously replaced over time and they are selected on a household basis to be representative of the Danish population. TV meters are installed in each of the participating households, and when panel members watch television, they register on the TV meter. In this way, the individual panel member's viewing behaviour is registered instantly. Thus, even though they still report that they are watching television, what they are watching is automatically recorded, which reduces measurement error substantially.

In collaboration with *DR*, viewership data for Friday evenings over the 9-year period were extracted from Kantar Gallup's TV meter database. While individual-level data were not accessible to us, the available data are divided into subsamples representing subgroups of viewers defined by age, education and interest in the news (this information is obtained through a survey when individuals join the panel). Panel members are divided into five age groups and five levels of education. In addition, individuals are divided into five different groups based on their self-reported interest in watching news on TV.

Measures

Viewership data from Kantar Gallup's TV meter database for both the overall population and each of the subgroups mentioned above contain *ratings* and *universe size* for the Friday evening newscast. Rating indicates the average amount of viewers watching the newscast per minute, while universe size indicates the amount of people in the population group of interest. As the general population and the population in the subgroups vary over time, we calculated the shares (ratings/universe size) watching news. These shares were calculated for each Friday in the 9-year period, both for the overall population and each of the 15 subgroups, thereby allowing us to make comparisons over time without influence from variations in population size. In addition, for each Friday, we coded whether *The X Factor* was shown only before the newscast, both before and after the newscast, or not at all. Further, the season of *The X Factor* was coded on a calendar year basis to capture potential time varying effects. The final dataset consists of data from 457 Fridays: 344 without *The X Factor*, 51 with *The X Factor* only before the newscast and 62 with *The X Factor* before and after the newscast.

Table 1. Effect of time and *The X Factor* on population shares watching news on Fridays across different groups, 2008–2016.

	Time (year)	Grab effect		Wrap effect	
		The X Factor before	Time × The X Factor before	The X Factor before and after	Time × The X Factor before and after
Overall	−.61*** (.12)	8.55*** (.57)	.79*** (.19)	14.92*** (.51)	.12 (.17)
Age (years)					
3–14	−.10 (.11)	7.84*** (.50)	.74*** (.18)	13.85*** (.47)	.03 (.18)
15–29	−.29** (.09)	6.57*** (.39)	.59*** (.14)	12.19*** (.37)	−.26 (.13)
30–44	−.67*** (.13)	10.19*** (.57)	.61** (.20)	17.72*** (.55)	−.60** (.18)
45–59	−.68*** (.14)	10.82*** (8.68)	.93*** (.29)	18.74*** (.59)	.65** (.20)
Above 60	−1.24*** (.14)	7.04*** (1.17)	1.04** (.39)	11.68*** (1.05)	.74* (.36)
Education					
No	−.76*** (.10)	6.58*** (.61)	.65** (.20)	11.61*** (.56)	.27 (.18)
Vocational	−.68*** (.12)	7.81*** (.68)	.72** (.23)	13.98*** (.60)	.21 (.21)
Short	−.46** (.13)	9.81*** (.69)	.82** (.25)	16.08*** (.63)	.38 (.23)
Medium	−.99*** (.12)	9.06*** (.74)	.60* (.24)	14.91*** (.66)	.04 (.21)
Long	−.76*** (.13)	10.05*** (.67)	.45 (.23)	14.84*** (.62)	−.45* (.21)
Interested in news					
Not	−.32*** (.07)	4.63*** (.41)	.45** (15)	3.24*** (.40)	−29* (14)
Almost not	.10 (.08)	5.78*** (.43)	.75** (.25)	14.35*** (.63)	.27 (.22)
A bit	−.08 (.09)	6.37*** (.40)	1.00*** (.18)	13.73*** (.44)	.36* (.16)
Rather	−.22* (.11)	8.02*** (.50)	.44** (.15)	12.15*** (.38)	−.09 (.14)
Very	−.67*** (.12)	8.60*** (.71)	.71*** (.16)	9.25*** (.39)	.21 (.15)
N (days)	457	395	395	406	406

Entries show unstandardized effect estimates with standard errors from OLS regression with share watching news within each group as the dependent variable and time, *The X Factor* before and *The X Factor* before and after as independent variables.
*p < .05, **p < .01, ***p < .001.

Results

As the first step in our analysis, we do a set of 80 individual ordinary least squares (OLS) regressions to examine the statistical significance of all the differences predicted by our five hypotheses as well as the differences over time. The results are shown in Table 1. In the second column of Table 1, the entries show the effect of time on shares watching news, both for the overall population and the 15 subgroups of interest. It is worth noting that the shares watching news in almost all of these groups are decreasing over time. Interestingly, this decrease is largest among the groups that watch most news, that is, the older age groups and people who are very interested in the news.

The third column of Table 1 shows the effect of scheduling *The X Factor* before the newscast. Both for the overall population and for all subgroups, we observe a statistically significant effect on shares watching news. These findings confirm the first expectation (H1) that entertainment shows before the newscast increase the news audience (the grab effect). The fourth column in Table 1 shows the interaction between scheduling *The X*
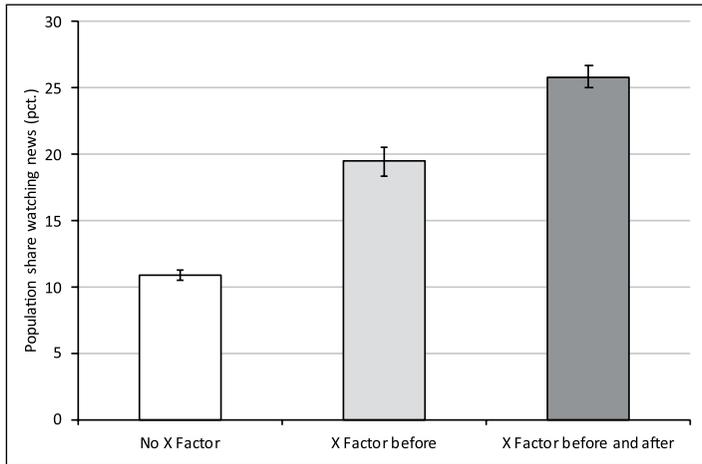
Figure 1. Overall population shares watching news on Fridays with and without *The X Factor* (with 95% confidence intervals).

Factor before the newscast and time. With the exception of people with a long education, we find statistically significant and positive interactions. These findings imply that the grab effect has become stronger over time.

The fifth column of Table 1 shows the effect of placing *The X Factor* before and after the newscast. Again, we find significant effects, both for the overall population and each of the subgroups. These findings confirm our second expectation (H2) that entertainment shows before and after the newscast can increase the news audience (the wrap effect). Finally, in the sixth column in Table 1, we examine the interaction between scheduling *The X Factor* before and after the newscast and time. Here, we find fewer significant results, and results point in different directions. We return to these results below. However, the first part of the analysis generally shows highly significant effects.

Next, in order to get an impression of the magnitude of the grab and wrap effects of *The X Factor*, we examine the overall average population shares watching the newscast on Fridays without *The X Factor*, with *The X Factor* only before and with *The X Factor* before and after, for all 9 years together. The results are shown in Figure 1.

The results show very large grab and wrap effects of *The X Factor*. On Fridays without *The X Factor*, 11% of the total population watched the newscast. However, on Fridays with *The X Factor* before the newscast, this share increased to 19.5% of the total population, and on Fridays with *The X Factor* before and after, it increased to 26%. This corresponds to a relative increase in news audience of approximately 84% on Fridays with *The X Factor* before the newscast and approximately 140% on Fridays with *The X Factor* before and after. These findings are clearly in line with our first two hypotheses, which predicted that entertainment shows before (H1) as well as before and after (H2) the newscasts increase the news audience.

To investigate our research question, that is, the development of the grab and wrap effects over time, Figure 2 illustrates these effects for each of the 9 years separately. The figure shows several interesting things. First, the news audiences are generally shrinking
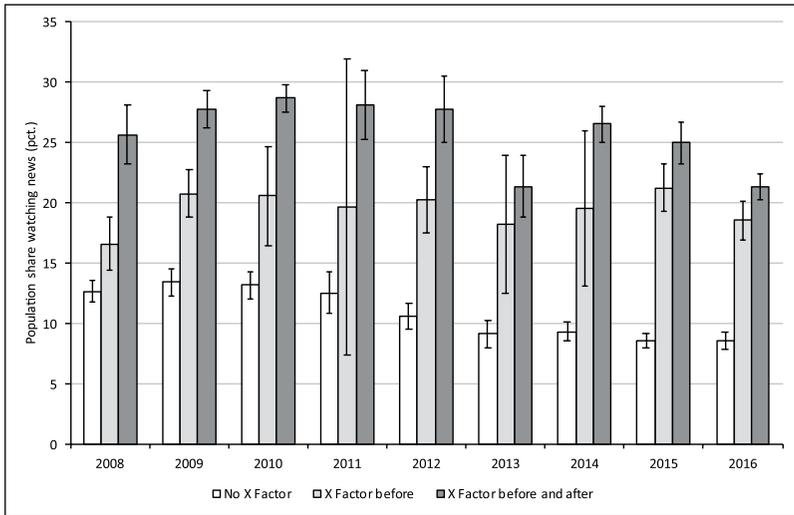
Figure 2. Overall population shares watching news on Fridays with and without *The X Factor* over time, 2008–2016 (with 95% confidence intervals).

over time, from approximately 12.5% of the population watching news on Fridays without *The X Factor* in 2008 to approximately 8.5% in 2016. Second, we see that the share watching news when *The X Factor* was scheduled before the newscast is quite stable across all years, indicating that the grab effect of placing *The X factor* before the news increases over time. Third, we see a fluctuating pattern for the wrap effect, as the effect of placing *The X Factor* before and after the newscast varies over the years, although it is generally stronger than the grab effect.

To further explore the grab and wrap effects over time, we examine the relative increases in population shares watching news on Fridays with *The X Factor* only before and on Fridays with *The X Factor* before and after. In other words, we examine how much the news share increases as a result of grabbing and wrapping the audience. As seen from Figure 3, the relative wrap effect is in general stronger than the relative grab effect, and both the relative grab and wrap effects in general increase over time. However, these relative effects also decrease in some years, which is probably due to season-specific characteristics of *The X Factor*.

We now turn to our hypotheses regarding differences across subgroups (H3–H5). First, we explore the shares of each subgroup watching news on Fridays with and without *The X Factor*. Panel A in Figure 4 shows the share of different age groups watching news on Fridays without *The X Factor*, with *The X Factor* before only and with *The X Factor* before and after. In general, younger people watch less news than older people on Fridays without *The X Factor*. However, this gap is decreased when *The X Factor* is shown. Panel B in Figure 4 shows that education is – perhaps somewhat surprisingly – not a decisive factor for the grab and wrap effects. The shares of different educational groups watching news are more or less the same on Fridays with and without *The X Factor*. Panel C in Figure 4 illustrates the share of groups with different interests in watching news on Fridays
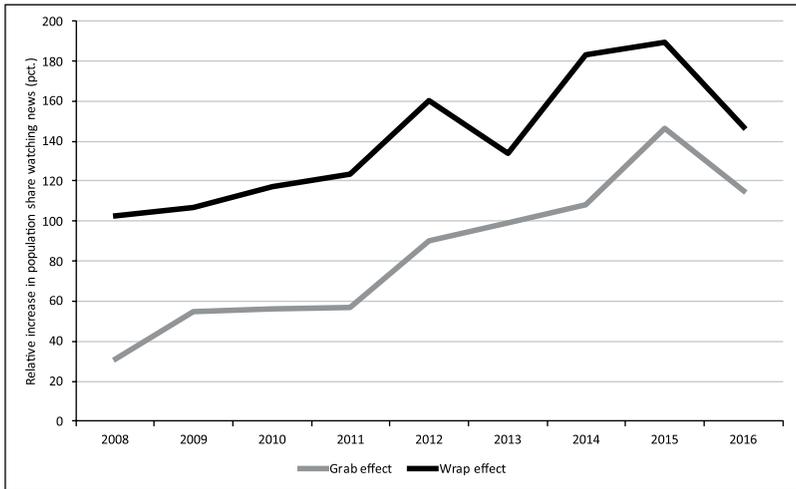
Figure 3. Relative grab and wrap effects of *The X Factor* over time, 2008–2016.

with and without *The X Factor*. Naturally, the share watching news on Fridays without *The X Factor* is higher among people who are very interested in watching news compared to people with lower interest. Although the share watching news on Fridays with *The X Factor* is higher among people who are very interested in news, the share watching news within the groups of lower interest also increases quite substantially.

To get a better understanding of the differences across these groups, we plot the relative grab and wrap effects of each group over time in Figure 5. Focussing first on the relative grab and wrap effects for different age groups displayed in Panels A and B, we see that these effects are stronger for younger age groups, in line with H3. In addition, these effects are in general increasing over time, although with a decline in some years. Panels C and D show the difference in relative grab and wrap effects for different educational groups. Consistent with the above findings, we do not find any differences across educational groups and thus no support for H4. However, we again observe that the relative grab and wrap effects are increasing over time. Panels E and F show the difference in relative grab and wrap effects for groups with different interests in watching news. The findings show that how the relative grab and wrap effects are stronger for groups with lower interest in watching news, confirming H5. Again, we observe a general increase in these effects over time, albeit with yearly fluctuations.

Discussion

The explosion in the supply of different types of media content over the last decades has made it easier for people with low motivation for news consumption to avoid news in favour of more entertaining content (e.g. Prior, 2005, 2007). The result is what has been called 'the demise of the inadvertent audience' (Iyengar, 2017). This development presents a general democratic problem because a functioning democracy relies on a reasonably informed population. The development is also a problem for public
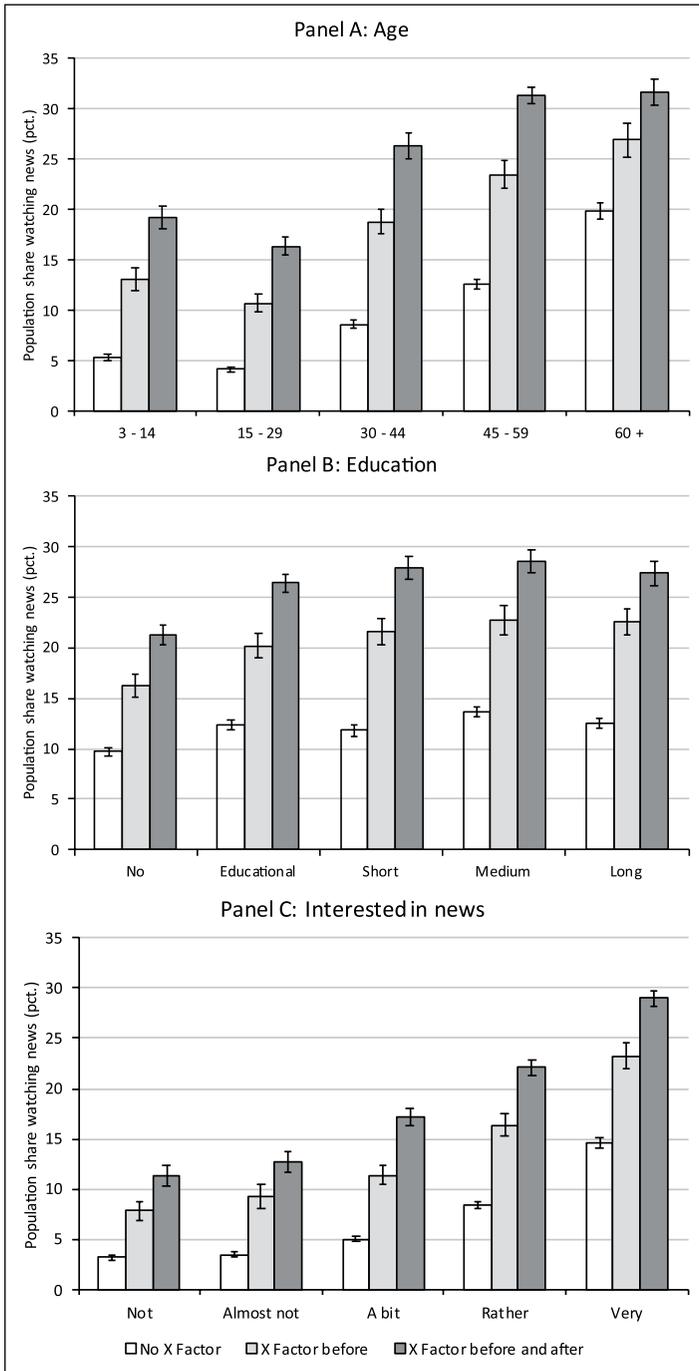
Figure 4. Shares watching news on Fridays with and without *The X Factor* across different age, education and interest groups (with 95% confidence intervals).
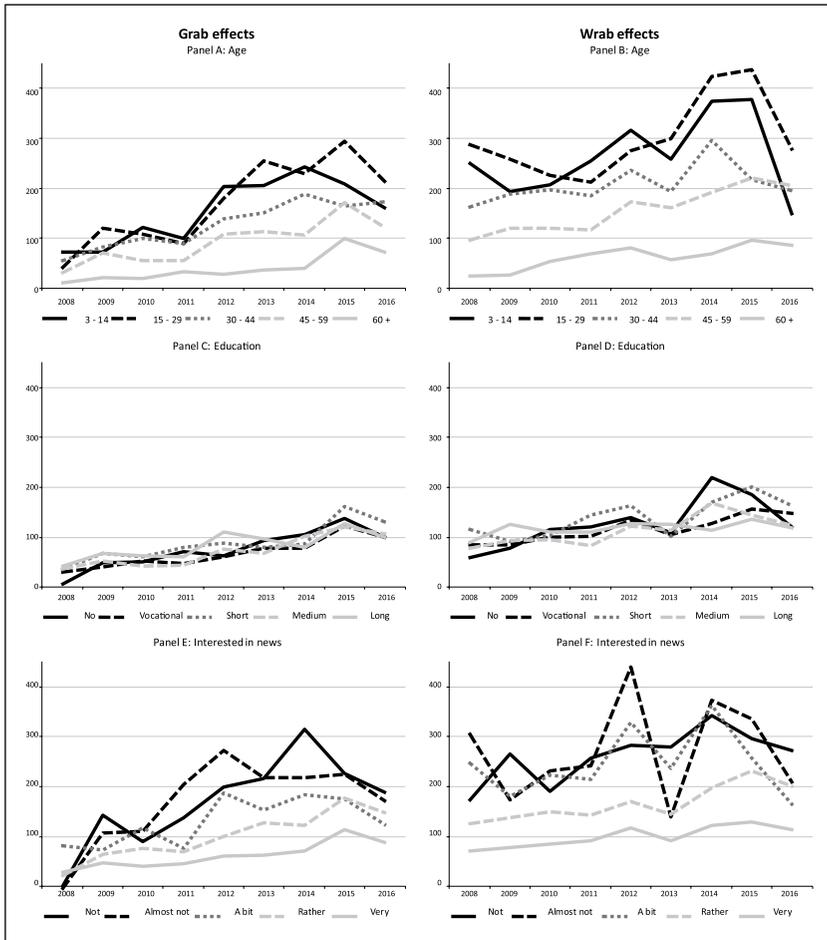
Figure 5. Relative grab and wrap effects (pct.) across age, education and news interest groups over time, 2008–2016.

service broadcasters, who are tasked with providing information to all parts of the public. However, as our study shows, the notion of inadvertent audiences should not be put to an early grave. While news broadcasts face fierce competition from entertainment in today's high-choice media environment, entertainment not only push people away from the news but can also draw viewers towards the news. Based on high-quality data on TV viewership, our analysis has demonstrated that a popular entertainment show, *The X Factor*, had a substantial positive impact on viewership of the newscast when scheduled immediately before and after. Moreover, these effects were particularly large among viewers with an otherwise low propensity to watch the news, specifically younger age groups and people with a low interest in news. These effects even increased rather than declined over a period of time when the supply of different types of media content grew substantially.

These findings provide several contributions. First, not only do they demonstrate that even in today's high-choice media environments, it is possible to generate inadvertent news audiences, but they also demonstrate that the combination of entertainment and news in television scheduling is a crucial factor for creating opportunity structures conducive to inadvertent news audiences. This finding adds to a literature, which has so far focussed almost entirely on the frequency and time slots of the news broadcasts themselves (e.g. Aalberg et al., 2010; Esser et al., 2012). Second, our findings illustrate that even in a media environment where personal motivations become more important for content choices, structural or situational factors are still extremely important for television viewership. This dovetail with past research suggests that television viewing is a rather passive activity influenced by viewing context and structures, such as habits and programme scheduling (Wonneberger et al., 2011, 2012). Third, the findings feed into the debates about public service media that currently take place in many European countries. In contrast to market-oriented media, public service media have an obligation to provide all parts of the population with quality news. In order to succeed in this, our results suggest that they should not only focus on offering frequent news, but also on offering a combination of entertainment and news. This point is important to have in mind, when it is argued that public service broadcasters should focus exclusively on content that would not survive on market terms.

One might question whether inadvertent viewers learn much when exposed to the news, which they are generally not very interested in. While our analysis did rely on behavioural TV meter data, we cannot rule out that some of our respondents paid little attention to the news, perhaps turning to their phones or talking to family members. However, previous studies have shown that inadvertent viewers learn from the news despite low motivation (Schönbach and Lauf, 2004; Shehata, 2013; Shehata et al., 2015). In any case, the grab and wrap effects found in our analyses are so large that we are confident in concluding that *The X Factor* did lead to a meaningful increase in news exposure – and thereby learning – even if these inadvertent viewers were second screening or getting coffee during parts of the news broadcast.

It is also worth noticing that the grab and wrap effects are found by comparing Fridays with *The X Factor* to Fridays without *The X Factor*. On these baseline Fridays, other types of entertainment content were broadcasted before and after the news, and they are likely to also have generated inadvertent news audiences. Thus, the effects in this study can be understood as the additional effect of broadcasting *The X Factor* in connection to the news rather than other types of entertainment content. As such, the effects are a conservative measure of the potential of entertainment shows to generate inadvertent news audiences. This makes our findings even more remarkable. Related, we also conducted a robustness check only including data from the winter months (October–March) to rule out the potential of any seasonal effects. The results of this robustness check by and large show the same results as the reported findings.

However, focussing on a single case has its limitations. We cannot extrapolate the effects from this one popular entertainment show to generally conclude which type of programmes should be scheduled in which way to create the opportunity structures most suited for inadvertent news audiences. Nevertheless, our study provides some indications. First, the entertainment show placed adjacent to the news broadcast should have broad appeal to all groups, especially the young and those least interested in news. Second, having a cliffhanger – like the follow-up part of *The X Factor* shows where

decisions on the contestants' participation is announced – increases the incentive to remain at the television channel throughout the newscast, which in turn increases inadvertent audience substantially. Third, in a time when an increasing part of the television viewing is on demand via the Internet, it may also be important that there is an interactive part of the entertainment show or that there is an extra excitement of watching the show live. For instance, a sporting event with news in the half time break appears to fit this definition. Future research should address these and other specific questions of how to combine entertainment shows with news to create ideal opportunity structures for inadvertent news audiences in today's high-choice environment.

The creation of such opportunity structures for inadvertent audiences does raise the question whether it is ethically right to nudge or 'trick' people into watching news they would otherwise not have chosen to watch. On one hand, critics argue that this way of scheduling public service broadcasting is overly paternalistic and interferes with consumer sovereignty. The implication for these critics is that public service broadcasting should be restricted to broadcasting content that would not be sustained by the market, or that public service broadcasting should be abandoned altogether (Donders and Pauwels, 2008; Syvertsen, 1991). On the other hand, one can also defend the use of popular entertainment shows to create opportunity structures conducive to inadvertent audiences by pointing to the positive effects on knowledge and engagement among the least interested. In their seminal book on nudging, Thaler and Sunstein (2009) argue that as long as choices are not forced upon people, setting up a choice architecture that will make some choices more likely than others does not violate the principle of free choice. In the case of opportunity structures for inadvertent audiences for television news, people can always pick up the remote control and change the channel or turn off the television set.

The normative questions on the appropriateness of creating opportunity structures conducive to inadvertent audiences cannot be resolved by an empirical study such as ours. However, our results can serve as an input to debate on the ultimately political question whether inadvertent audiences are desirable. It sheds light on an often-overlooked aspect of creating opportunity structures that facilitate inadvertent news consumption, namely the grab and wrap effects of entertainment shows. By doing so, the study has contributed to the knowledge on how news can reach citizens that would normally not watch the news and thereby reduce the information gap between the most and the least interested citizens.

Funding

ORCID iD

Kim Andersen https://orcid.org/0000-0001-8282-596X

References

Aalberg T, van Aelst P and Curran J (2010) Media systems and the political information environment: A cross-national comparison. *The International Journal of Press/Politics* 15(3): 255–271.
Althaus SL, Cizmar AM and Gimpel JG (2009) Media supply, audience demand, and the geography of news consumption in the United States. *Political Communication* 26(3): 249–277.

Arceneaux K and Johnson M (2013) *Changing Minds or Changing Channels? Partisan News in an Age of Choice*. Chicago, IL: The University of Chicago Press.

Bennett WL and Iyengar S (2008) A new era of minimal effects? The changing foundations of political communication. *Journal of Communication* 58(4): 707–731.

Blekesaune A, Elvestad E and 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.

Blumler JG (1970) The political effects of television. In: Halloran JD (ed.) *The Political Effects of Television*. London: Panther, pp. 68–104.

Curran J, Iyengar S, Lund AB, et al. (2009) Media system, public knowledge & democracy: A comparative study. *European Journal of Communication* 24(1): 5–26.

David CC (2009) Learning political information from the news: A closer look at the role of motivation. *Journal of Communication* 59(2): 243–261.

Diddi A and LaRose R (2006) Getting hooked on news: Uses and gratifications and the formation of news habits among college students in an Internet environment. *Journal of Broadcasting & Electronic Media* 50(2): 193–210.

Donders K and Pauwels C (2008) Does EU policy challenge the digital future of public service broadcasting?: An analysis of the commission's state aid approach to digitization and the public service remit of public broadcasting organizations. *Convergence* 14(3): 295–311.

Esser F, de Vreese CH, Strömbäck J, et al. (2012) Political information opportunities in Europe: A longitudinal and comparative study of thirteen television systems. *The International Journal of Press/Politics* 17(3): 247–274.

Iyengar S (2017) A typology of media effects. In: Kenski K and Jamieson KH (eds) *The Oxford Handbook of Political Communication*. New York: Oxford University Press, pp. 59–68.

Iyengar S, Curran J, Lund AB, et al. (2010) Cross-National versus individual-level differences in political information: A media systems perspective. *Journal of Elections, Public Opinion and Parties* 20(3): 291–309.

Krugman HE and Hartley EL (1970) Passive learning from television. *Public Opinion Quarterly* 34(2): 184–190.

LaRose R (2010) The problem of media habits. *Communication Theory* 20(2): 194–222.

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.

Prior M (2007) *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections*. Cambridge: Cambridge University Press.

Prior M (2009) The immensely inflated news audience: Assessing bias in self-reported news exposure. *Public Opinion Quarterly* 73(1): 130–143.

Schönbach K and Lauf E (2002) The 'trap' effect of television and its competitors. *Communication Research* 29(5): 564–583.

Schönbach K and Lauf E (2004) Another look at the 'trap' effect of television – and beyond. *International Journal of Public Opinion Research* 16(2): 169–182.

Shehata A (2013) Active or passive learning from television? Political information opportunities and knowledge gaps during election campaigns. *Journal of Elections, Public Opinion and Parties* 23(2): 200–222.

Shehata A, Hopmann DN, Nord L, et al. (2015) Television channel content profiles and differential knowledge growth: A test of the inadvertent learning hypothesis using panel data. *Political Communication* 32(3): 377–395.

Skovsgaard M, Shehata A and Strömbäck J (2016) Opportunity structures for selective exposure: Investigating selective exposure and learning in Swedish Election Campaigns Using Panel Survey Data. *The International Journal of Press/Politics* 21(4): 527–546.

Strömbäck J (2005) In Search of a Standard: Four models of democracy and their normative implications for journalism. *Journalism Studies* 6(3): 331–345.

Strömbäck J (2017) Does public service TV and the intensity of the political information environ-ment matter? *Journalism Studies* 18(11): 1415–1432.

Strömbäck J and 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.

Strömbäck J, Djerf-Pierre M and Shehata A (2013) The dynamics of political interest and news media consumption: A longitudinal perspective. *International Journal of Public Opinion Research* 25(4): 414–435.

Syvertsen T (1991) Public television in crisis: Critiques compared in Norway and Britain. *European Journal of Communication* 6(1): 95–114.

Thaler RH and Sunstein CR (2009) *Nudge: Improving Decisions about Health, Wealth and Happiness*. London: Penguin Books.

Van Aelst P, Strömbäck J, Aalberg T, et al. (2017) Political communication in a high-choice media environment: A challenge for democracy? *Annals of the International Communication Association* 41(1): 3–27.

Wonneberger A, Schoenbach K and van Meurs L (2011) Interest in news and politics–Or situ-ational determinants? Why people watch the news. *Journal of Broadcasting & Electronic Media* 55(3): 325–343.

Wonneberger A, Schoenbach K and van Meurs L (2012) Staying tuned: TV news audiences in the Netherlands 1988-2010. *Journal of Broadcasting & Electronic Media* 56(1): 55–74.

Zukin C and Snyder R (1984) Passive learning: When the media environment is the message. *Public Opinion Quarterly* 48(3): 629–638.

Appendix 1

Table 2. Number of respondents across groups.

	Number of respondents		
	Mean	Min.	Max.
General	2136	2034	2516
Age (years)			
3–14	354	300	392
15–29	332	272	387
30–44	450	404	518
45–59	481	441	538
60+	518	405	777
Education			
No	367	320	424
Vocational	685	629	802
Short	117	74	188
Medium	296	233	407
Long	187	162	229
Interested in news			
Not	61	39	113
Almost not	81	46	130
A bit	210	134	287
Rather	497	418	595
Very	1001	840	1227