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Public television and anti-immigrant sentiments in Europe. A multilevel analysis of patterns in television consumption

Abstract: Mass media have been accused of cultivating anti-immigrant sentiments in Western societies. Most studies on this topic, however, have not made a distinction between the types of television program (information vs. entertainment) or television station (public vs. commercial). Adopting a comparative approach, we use data from the six waves of the European Social Survey (ESS, 2002–2012, n = 162,987) to assess the relationship between individual and aggregate level patterns of television consumption and anti-immigrant sentiments in European societies. Individual television viewing time is positively associated with anti-immigrant sentiments, while frequent exposure to news and information programs is associated with lower levels of anti-immigrant sentiments. At the aggregate level we observe a positive effect of the total viewing time in society on anti-immigrant sentiments. In the conclusion we offer some suggestions on how this effect could be explained.

Keywords: public broadcasting, anti-immigrant sentiments, European Social Survey, multilevel analysis, television, media consumption

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Introduction

The social impact of stereotyping in television content has been a topic for research for quite a while. It has been found that ethnic minorities and immigrants are routinely associated with criminal (Dixon and Linz, 2000; Iyengar and Gilliam, 2000), economic (Eschholz, Bufkin, and Long, 2002; Jacobs, Claes, and Hooghe, 2015) and cultural threats (Guterman, 2013; Wirtz, Van der Pligt, and Doosje, 2016). The expectation therefore is that television consumption and frequent exposure to this type of messages will be positively associated with negative outgroup attitudes in society (Entman and Gross, 2008; Schemer, 2014). In this line of research, however, it is important to distinguish between various forms of media content. Previous research has demonstrated that the relationship between attitudes and, for example, entertainment television can be totally different from seeking information on television (Prior, 2005). Specifically, for the European context, it has also been found that public broadcasting television may be related to attitudes in a different manner than commercial broadcasting (Ariely, 2015; Holtz-Bacha, 1990; Newton, 2016; Schmitt-Beck and Wolsing, 2010). Therefore, any study investigating the relationship between television consumption and attitudes should adopt a multidimensional approach: One can expect the relationship between television consumption and public opinion to be dependent upon the specific types of television programs and stations viewers prefer (Esser and de Vreese, 2007; Hooghe, 2002; Moeller and de Vreese, 2013; Newton, 1999; Prior, 2005).

Furthermore, we know that television effects should not be situated only on the individual level. Even controlling for individual patterns of television consumption, media systems as such also have been documented to matter as they could have an indirect effect on the individual or a direct effect on the prevailing attitudinal climate within a society (Curran, Iyengar, Brink Lund, and Salovaara-Moring, 2009; Slater, Snyder, and Hayes, 2006). Crucial in this regard is that television messages can reach even those who do not watch television at all, for instance, due to the role that interpersonal interactions and network partners play in diffusing specific television content. In line with previous studies, in this article we therefore also include aggregate level measurements about market shares and global television consumption patterns (Geber, Scherer and Hefner, 2016; Schmitt-Beck and Wolsing, 2010).

In the current study, we include both individual-level and society-level information on television consumption. The use of data from the six waves of the European Social Survey (ESS, 2002–2012) allows for a comparison both over time and across countries in Europe. By including all six available waves of the ESS, we can maximize the variation with regard to market share and the presence of national minorities. We combine these population data with information on the

market share of public and commercial broadcasters, an information source not yet routinely included in this kind of research, but which is based on reliable market indicators. The broadcasting systems in European countries offer enough variance to investigate our hypotheses, as some countries have a strong tradition with regard to public broadcasting, while in other countries this is not the case. Self-evidently, this kind of research design does not allow us to demonstrate any form of causality. Therefore, we include a full range of control variables that should allow us to alleviate at least some concerns about self-selection. If even after including these control variables we still find significant relations, this will lead to the assumption that it might be useful to conduct more in-depth research on this relationship.

In this paper, we first review the literature on the relationship between television consumption and anti-immigrant sentiments. We then move on to the data and methods section, and following the analysis, we conclude with some observations on both the nature of television consumption and on the societal role of public broadcasting.

Television consumption and anti-immigrant sentiments

As Western societies are becoming more ethnically diverse, issues such as immigration and diversity have shifted toward the center of public and political debate (Kriesi et al., 2012; McLaren, 2003). While the occurrence of anti-immigrant sentiments is a well-documented phenomenon, there is fierce academic debate about their origins (Ceobanu and Escandell, 2010). Scholarly attention has, among others, focused on the mass media as an important contextual determinant for the quality of the intergroup relations in society (Boomgaarden and Vliegenthart, 2009; Schemer, 2012; Schlueter and Davidov, 2013). Although the relationship between television and anti-immigrant sentiments has attracted substantial scholarly attention, studies systematically addressing the role of different types of television programs and stations in Western Europe are scarce. Moreover, studies that have considered the role of contextual patterns of television consumption in shaping opinions on immigrants are virtually non-existent (Schmitt-Beck and Wolsing, 2010). The main goal of this study, therefore, is to investigate media effects on the occurrence of anti-immigrant sentiments, by taking into account the different components of television-watching behaviour. While it has to be acknowledged that our research design does not allow causality to be detected, just establishing a relation is theoretically relevant in this regard.

The main reason to expect a relation between television and anti-immigrant sentiments is that previous research suggests that television content indeed is routinely characterized by stereotyping practices. The body of research suggests three main patterns of stereotyping: related to crime (Dixon and Linz, 2000; Iyengar and Gilliam, 2000), socio-economic status (Armstrong, Neuendorf, and Brentar, 1992; Eschholz et al., 2002; Jacobs et al., 2015; Signorielli and Kahlenberg, 2001), and religious and/or cultural issues (Das, Bushman, Bezemer, Kerkhof, and Vermeulen, 2009; Guterman, 2013). Simultaneously, we know that anti-immigrant sentiments among the population are largely based on economic and/or cultural grounds (O'Rourke and Sinnott, 2006), or prompted by fear of crime (Dinas and van Spanje, 2011). In line with these studies, we therefore expect a positive association between television time and anti-immigrant sentiments:

> H1: Individual television viewing time is positively associated with anti-immigrant sentiments.

Dimensions of television effects

Back in the 1990s, researchers often contented themselves with rather general measures of television effects (Cappella and Jamieson, 1997; Gerbner, Gross, Morgan, Signorielli, and Shanahan, 2002; Newton, 1999; Robinson, 1976; Uslaner, 1998). In later studies, however, it was stressed repeatedly that specific television content matters and that therefore one should not expect uniform television effects to occur (Ariely, 2015; Esser and de Vreese, 2007; Hooghe, 2002; Moeller and de Vreese, 2013; Newton, 1999; Prior, 2005).

With regard to the type of television programs, it has been observed that a preference for programs about news, politics and current affairs is positively related to a broad range of civic attitudes and behaviors. This is related to the fact that the consumption of news results in well- informed and motivated citizens, which is a feature known to be related to civic engagement (Norris, 2000). Viewers with a preference for news media, on average, have higher levels of political knowledge (Curran et al., 2009; Prior, 2005; Vincent and Basil, 1997), higher levels of social and political trust (Lee, Cappella, and Souhwell, 2003; Schmitt-Beck and Wolsing, 2010; Shah, McLeod, and Yoon, 2001), and they participate more intensively in politics (Esser and de Vreese, 2007; Holtz-Bacha, 1990; Livingstone and Markham, 2008; Zhang and Chia, 2006). Frequent exposure to entertainment television, on the other hand, is related to attitudes and behavior which are less civic. (Besley, 2006; Eyssel, Geschke and Frindte, 2015; Hooghe, 2002). As

the previous research suggests that news programs produce specific effects, our hypothesis is:

> H2: Informational use of television at the individual level is negatively associated with anti-immigrant sentiments.

Earlier studies show that not only the type of program might be relevant in this regard, but also the type of broadcaster (Aarts and Semetko, 2003). Self-evidently, commercial stations will be more inclined to pay attention to entertainment programs, as they are more likely to experience pressure to keep up their market share, and as entertainment is considered commercially more attractive (Prior, 2007). In addition to this difference in program type, however, public and commercial broadcasting stations also seem to differ systematically in other, more nuanced ways. Not only are public broadcasters traditionally expected to serve the public good (Curran et al., 2009), they have often sought to promote tolerance and to report on increasing ethnic diversity and immigration in a balanced manner. Given the current salience of the debate on ethnic diversity in Europe, this would imply that they should disseminate more positive information about immigrants and ethnic minorities. Studies that have assessed whether public and commercial television depict minorities and immigrants in a diverging way, however, are scarce, although the conclusion seems to be that public television reports in a slightly more balanced manner on ethnic minorities (but see Ruhrmann, 2002; Ter Wal, 2002; Van den Bulck and Broos, 2011). An EU study has also found that public broadcasters adhere more carefully to cultural diversity in their program content (Rogers, O'Boyle, Preston, and Fehr, 2014). Furthermore, a recent study has specifically compared immigration news coverage on public and commercial stations in the Flemish context (Jacobs, Meeusen, and D'Haenens, 2016). Its conclusion was that the latter reports slightly more negatively about immigration, making more references to elements of sensationalism and tabloidization (Jacobs et al., 2016). They also found in an individual-level analysis that a preference for public news was indeed associated with lower levels of anti-immigrant sentiments compared to a preference for commercial news. This is in line with evidence stating that other types of civic attitudes and behavior are more closely related to watching public broadcasting television, and we will thus test whether this assumption holds. Public broadcasting stations are traditionally expected to play an important gatekeeping role in democratic societies as they are expected to contribute to 'entertaining, informing and educating' their audience (Holtz-Bacha and Norris, 2001; Newton, 2016). Most studies that have assessed the differences between public and commercial television have arrived at the conclusion that exposure to public broadcasting stations is more closely related to civic attitudes and behavior than exposure to their commercial counter-

parts (Aarts and Semetko, 2003; Curran et al., 2009). While the traditional public broadcasting system has come under attack in a number of European countries, in numerous societies public broadcasting corporations still have a vested mandate to inform public opinion, and the underlying policy assumption is that they do so in a specific manner (Soroka et al., 2013). One would therefore expect exposure to public broadcasting television to be negatively associated with anti-immigrant sentiments. This leads to our third hypothesis:

> H3: Large market shares for public broadcasting television is negatively associated with anti-immigrant sentiments.

These effects are not just situated at the individual level, but also on a society level. Although at first sight it might seem redundant to include television time both at the individual and the aggregate level, this is the best available strategy to detect indirect media effects that operate independently from one's own media consumption (Ariely, 2015; Slater et al., 2006). This approach is in line with the traditional two-step flow of communication theory, which assumes that leading actors within society obtain their information from the mass media and subsequently diffuse this kind of information in their personal networks (Ahn, Huckfeldt, Mayer, and Ryan, 2013). In this case, this would imply that if a large proportion of the interaction partners of an actor is exposed to a specific media content, this could still have an indirect association with the actor's attitudes, even controlling for whether she or he is exposed to that specific content or not. This research on aggregate level effects leads to our fourth hypothesis:

> H4: Aggregate television viewing time is positively associated with anti-immigrant sentiments.

In the next paragraph, we elaborate more on how these theoretical perspectives on the complex nature of television consumption patterns are relevant for investigating the relationship between television consumption and anti-immigrant sentiments.

In our empirical models we will also include various control variables that are related to self-selection, and although these do not allow us to establish causality, at least we can be more confident that the relationships we find are not spurious.

Data, method and measurements

Data

For the measurement of anti-immigrant sentiments as well as for the individual characteristics of the respondents, we rely on data from the European Social Survey (ESS), which we have supplemented with aggregate country-level data on television consumption and macro-economic indicators. The ESS is a representative and comparative cross-sectional repeated survey that is carried out every two years in more than twenty European societies. The first data collection wave started in 2002 and the latest data available originate from the sixth round that was conducted in 2012. The main advantage of relying on all six waves of the survey is that we can include more variance, both with regard to the inflow of non-nationals and to the market share of public broadcasting, thus strengthening the robustness of our models. In each participating country individuals aged 15 and over were questioned about their opinions, attitudes and demographics in face-to-face interviews. The ESS is chosen as a data source because its design has several important advantages given the current study's purposes. First, the ESS dataset contains a reliable and validated anti-immigrant sentiments scale, as well as several other relevant individual-level attitudinal and socio-demographic variables. Second, the data permits both comparisons over time and across different European societies. Third, the ESS is widely recognized for its high-quality survey design and data collection (Lynn, 2003).

In the multiple regression analysis, we explain anti-immigrant sentiments from 2002 until 2012 based on individual-level socio-demographic variables, indicators for individual and aggregate television consumption, and macro-economic indicators which might also be related to anti-immigrant sentiments in society. We employ the ESS data from all six waves in order to assess the robustness of the findings over time. Only citizens whose nationalities correspond to the ESS country in which they reside are included in the analysis, so that we can assess anti-immigrant sentiments among the native majority. The analysis entails the following 23 countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom. Since both Belgium and Switzerland can be considered culturally segmented countries in which media use patterns and television markets diverge between the different language communities (Meier, 2004; Sinardet, 2013), our analysis differentiates between the language regions in these countries. This means that the analysis contains information from 25 Euro-

pean societies, since for Belgium and Switzerland we distinguish respondents according to language group. Not every society was included in each ESS wave, although 15 out of 25 societies are represented in all six ESS waves. However, since the analyzing technique we have opted for, multilevel analysis, can handle missing data (Hox, 2010), the non-recurrence of some societies in all six waves does not influence the validity of the analysis. Every society is included in at least two of the six waves (more information can be found in the appendix). Finally, 162,987 respondents nested in 125 societies (always the combination of a country and the ESS round in which they participated) were included in the analysis. A design weight was applied in order to correct for differences in the selection probability of individuals in the population.

Method

The data structure is hierarchical containing two levels, with information on individuals (level one) that are nested within societies during a specific ESS round (level two). This type of two-level data structure requires multilevel modelling, which was developed to correctly analyze nested data (Snijders and Bosker, 1999; Steenbergen and Jones, 2002). Multilevel modelling thus permits the adjustment of the standard errors for the clusters in the data and an assessment of the effects of society-level variables while controlling for individual respondents' characteristics. Furthermore, as we also have hypotheses on the occurrence of country-level relations, we need a method of analysis that can include both individual and country-level associations simultaneously.

Measurements

Dependent variable. *Anti-immigrant sentiments:* The dependent variable, anti-immigrant sentiments, is measured as a scale composed of respondents' assessments on an eleven-point scale of the following three items on immigration: 'Immigration is bad or good for a country's economy'; 'Country's cultural life is undermined or enriched by immigrants'; 'Immigrants make a country a worse or a better place to live'. The one-dimensionality of these items is demonstrated by a principal component analysis (Cronbach's α: 0.85, Eigenvalue: 2.295, explained variance: 76.5), confirming the scale's internal consistency and reliability. The sum score, the average value for each respondent on the three questions, serves as our dependent variable 'anti-immigrant sentiments'. The anti-immigrant sentiments scale ranges from zero to ten (M = 4.84, SD = 2.02), whereby

a score closer to zero indicates lower levels of anti-immigrant sentiment and a score closer to ten indicates higher levels of anti-immigrant sentiment. This scale is routinely enclosed in the ESS questionnaire and is by now regularly used in this kind of research. While the measurement equivalence of the concept is not perfect, in practice it is sufficiently equivalent to warrant this kind of comparative analysis (Davidov et al., 2015).

Independent variables. *Television variables:* For the measurement of individual patterns of television consumption, the ESS data provide two questions. In order to assess the total amount of time respondents devote to watching television, we included the following question: 'On an average weekday, how much time, in total, do you spend watching television?' This item was measured on an eight-point scale ranging, in half-hour intervals, from zero ('no time at all') to seven ('more than three hours') (M = 4.37, SD = 1.89). Furthermore, we include a measurement that provides an indication about the amount of time spent watching specific television programs. The ESS includes a variable that measures, again in half-hour intervals, the amount of time respondents devote to watching news, politics and current affairs. To control for the possibility that viewers who consume a lot of television are more likely to be exposed to news and information programs simply because of their general television consumption habits, the amount of time spent watching the news, politics and current affairs is expressed as a proportion of the total time spent watching television (Schmitt-Beck and Wolsing, 2010). The resulting variable, which we have called 'informational television consumption' ranges from zero, referring to respondents that do not watch information and news content, to 100, referring to respondents that devote all their time spent watching information programs and news on television (M = 50.68, SD = 28.44). Within Europe, there is a high level of variation with regard to the content of television news, and the character of the television market (Donders, Pauwels and Loisen, 2013). The information about society-level television variables is obtained from the Yearbooks of the European Audiovisual Observatory that for most countries are based on real-life indicators of media use. These figures are considered highly reliable, but they are not yet routinely included in this kind of research. This observatory was established by the Council of Europe in order to collect market information about the audiovisual industry in European societies, and the data it collects are used as a basis for European policy. The data concern the average daily television audience for public broadcasting stations for each participating country/society in the year preceding the ESS round. The audience shares are collected by Eurodata-TV Worldwide, and are based on figures compiled by national audience measurement organizations. This information is collected using traditional sampling techniques and the 'people meter' system, and can thus be considered highly reliable (European Audiovisual Observatory, 2014).

The figures show that average audience shares for public broadcasting stations in European societies range from 12.2 % (Slovakia, ESS round 6) to 72.7 % (Denmark, ESS round 3) (M = 38.21; SD = 12.09). We also included a variable that assesses the average total television viewing time on a daily basis at the society level (in minutes per day, as an average score of the years the society was included in the ESS dataset). Here the society averages range from 136 minutes/day (German language group in Switzerland, ESS round 6) to 265 minutes/day (Hungary, ESS round 5) (M = 193.9; SD = 32.2). Both society level television consumption variables can thus be considered contextual television consumption variables that do not vary between individuals within societies, although they differ between societies in the various ESS rounds. In this regard, these aggregate patterns of television consumption can be included in the analysis as a characteristic of societies' television market. The aggregate television viewing variables thus always reflect the value for a given society in the year preceding the ESS round, hence this variable varies between ESS rounds and countries.

Control variables: Previous studies have shown that anti-immigrant sentiments are more likely to occur among specific groups of the population (Ceobanu and Escandell, 2010), and it is important therefore to include sufficient control variables. Our analysis takes into account different control variables at the individual and aggregate level that might be related to levels of anti-immigrant sentiment in societies. The first set of individual-level control variables concerns socio-demographic variables like gender (male respondents M = 0.49, SD = 0.50), age in years (M = 47.88, SD = 17.95), and socio-economic status. For respondents' socio-economic status, we included three variables. First, we take up the years of formal education respondents have completed (M = 12.54, SD = 3.96). Second, we take into account the level of satisfaction with household income. This variable is measured on a four-point scale ranging from a score of one ('very difficult on present income') to four ('living comfortably on present income') (M = 1.93, SD = 0.82). Satisfaction with household income is to be preferred over actual income estimates, given the high proportion of missing answers on this latter variable. Third, we took into account whether individuals have been unemployed in the past three months by using the question: 'Have you ever been unemployed and seeking work for a period of more than three months?' This was a binary variable, 0 = 'no', 1 = 'yes' (M = 0.25, SD = 0.44). Other individual-level control variables concern crime victimization, religious attendance, political ideology, life satisfaction and political interest. Victimization is operationalized as a dichotomous variable referring to 'whether the respondent or the household members has or have been a victim of burglary or assault in the last five years' (M = 0.20, SD = 0.40). We include this variable because of the relation between ethnic stereotyping and the portrayal of crime in mass media. Religious attendance is assessed

on a seven-point scale of the following question: 'How often do you attend religious services apart from special occasions'. The scale ranges from a score of one ('everyday') to seven ('never') (M = 5.50; SD = 1.51). Political ideology is operationalized as respondents' self-reported left-right orientation on an eleven-point scale (0 = left-wing, 10 = right-wing). The exact question was: 'In politics people sometimes talk of 'left' and 'right'. Using this card, where would you place yourself on this scale, where 0 means the left and 10 means the right?' (M = 5.12; SD = 2.11). Self-reported life satisfaction is measured on a ten-point scale ranging from one ('extremely dissatisfied') to ten ('extremely satisfied') (M = 7.13, SD = 2.13). Political interest was measured using the question 'How interested are you in politics', ranging from one ('very interested') to four ('not at all interested') (M = 2.50, SD = 0.68). Finally, we also included time variables, that is, dummies with the years of the ESS rounds, to evaluate whether there is a time trend in the level of anti-immigrant sentiments over the observation period (Semyonov, Raijman and Gorodzeisky, 2006). At the aggregate level, we included macro-economic control variables that have been shown to be related to anti-immigrant sentiments: economic performance, democratic stability and ethnic diversity. In order to have an indication on countries' economic performance and redistribution policies, we opted to include GDP per capita. This variable was operationalized as the average GDP per capita in US dollars for a country for the years it was included in the ESS data and is based on information from the Organization for Economic Co-operation and Development (OECD) (M = 33,839 SD = 17,483). It can be assumed that support for democracy and democratic ideas are inversely related to anti-immigrant sentiments. The democratic stability of a country was operationalized as the number of years the country in question has had a stable democracy since 1919, operationalized as an average score for the ESS rounds in which the country was included (Polity IV, 2011) (M = 58.89, SD = 44.2). Finally, since the ethnic composition of societies might be associated to levels of anti-immigrant sentiment, we also control for the inflow of foreigners, that is, residents without citizenship status. These data are also derived from the OECD and are operationalized as a percentage relative to the country's population (M = 0.67, SD = 0.47). Additional controls have made clear that there is no multicollinearity occurring as a result of these country-level variables.

Analysis and results

The relationship between individual and aggregate-level patterns of television consumption and anti-immigrant sentiments is analyzed via a multilevel model (Table 1). First, we present a null model with an intercept-only analysis in which the variance is split into two components: the variance between observations within societies ('within group variance'), and the variance between societies ('between group variance'). The size of the variances makes clear that individual-level characteristics are more important in explaining the prevalence of anti-immigrant sentiments in European societies than society-level characteristics. The intra-class correlation (ICC) shows 10.3 % of the variance in levels of anti-immigrant sentiment can be explained by society-level variables, which is substantial. This high level of intra-class correlation makes clear that multilevel analysis is indeed called for. In Model I, we add the independent variables, that is, both the television and control variables at the individual and society level, to the model.

Table 1: The relationship between television consumption and anti-immigrant sentiments.

	Null model B coefficients	Model I B coefficients	Model II B coefficients
Level 1: Individual level			
Television variables			
Total television viewing time		0.041(0.005)***	0.041(0.005)***
Informational television consumption		−0.002(0.001)***	−0.002(0.001)***
Control variables			
Gender: Female		0.013(0.016)	0.013(0.016)
Age (in years)		0.007(0.001)***	0.007(0.001)***
Years of education		−0.086(0.003)***	−0.086(0.003)***
Income satisfaction		0.153(0.010)***	0.152(0.010)***
Victimization		0.028(0.008)***	0.028(0.008)***
Religious attendance		0.069(0.015)***	0.069(0.015)***
Life satisfaction		−0.106(0.004)***	−0.106(0.004)***
Left-right orientation: Right-wing		0.095(0.009)***	0.095(0.010)***
Political interest		0.344(0.012)***	0.344(0.012)***
Unemployed		−0.030(0.016)^{Y}	−0.030(0.016)^{Y}
Year (ref. category: 2012)			
2002		0.114(0.150)	0.050(0.191)
2004		0.219(0.145)	0.134(0.168)
2006		0.184(0.168)	0.105(0.167)
2008		0.171(0.163)	0.116(0.160)
2010		0.247(0.168)	0.181(0.163)

Table 1: (continued)

	Null model B coefficients	Model I B coefficients	Model II B coefficients
Level 2: Society level (society * ESS round)			
Television variables			
Average market share public television		−0.010(0.004)**	−0.005(0.004)
Average television viewing time			0.004(0.002)*
Control variables			
GDP per capita			−0.003(0.004)
Democratic stability			−0.001(0.001)
Inflow of foreign population			0.023(0.101)
Intercept	4.818(0.061)***	4.624(0.209)***	3.887(0.531)
Variance society-level	0.455(0.161)	0.280(0.036)	0.247(0.030)
Variance individual level	3.591(0.148)	3.160(0.062)	3.160(0.062)
ICC	10.3%	8.8%	7.2%
Deviance	−336,681.57	−325,138.38	−325,130.41

Note: Entries are the result of a two-level OLS regression using Maximum Likelihood estimations in Stata. Data are weighted using the ESS design weight. Dependent variable: anti-immigrant sentiments. ***p<0.001, **p<0.01, *p<0.05, ᵞp<0.10 (two-tailed). N individual level = 162, 987, N aggregate level = 125. Source: ESS 2002–2012.

As the sample size at the individual level is rather high (n = 162,987), we first consider the amount of explained variance by including the independent variables in Model I to reflect on the meaningfulness of the results. It should be noted that the coefficients are unstandardized since they refer to different levels of measurement and therefore cannot be compared. We can observe that in Model I the within-group variance is 3.160, and the between-group variance is 0.280, and this indicates that both on the country as well as on the individual level this model is moderately successful in improving the explained variance compared to the null-model. Therefore, it is warranted to move on to a meaningful interpretation of the coefficients. With regard to the individual-level television variables, the results of Model I make clear that H1 and H2 are supported by the analysis: On the individual level, there is a strong positive relation between television time and anti-immigrant sentiments (H1), while frequent exposure to news and programs on politics and current affairs is negatively associated with anti-immigrant sentiments (H2), and this effect remains robust throughout the further analysis. If we consider the television variables at the aggregate level, we find in this model that H3

is confirmed: There is a positive effect of the market share of public broadcasting. However, if in Model II we subsequently add the aggregate level of viewing time, this variable helps us to explain the variance (confirming H4), while the effect of the market share of public broadcasting is rendered not-significant. Hence, while at first sight, a larger market share of public broadcasting seems to have an independent effect, in the subsequent analysis this effect is completely taken up by the fact that apparently in these countries, the average television viewing time in society is also higher. In particular, the fact that in some societies the average viewing time is much higher therefore seems to be particularly relevant. Still, given the large sample size, the significance levels should be interpreted with caution.

Model II also includes control variables at the individual and aggregate level, and here the results mostly confirm previous research (Ceobanu and Escandell, 2010). Older respondents have higher levels of anti-immigrant sentiment, and so have respondents that have recently been victimized as a result of burglary or an assault. Respondents that are less politically interested hold higher levels of anti-immigrant sentiment as well. But particularly respondents' educational level, income satisfaction and life satisfaction are negatively related to anti-immigrant sentiments. Considering the control variables at the aggregate level, we do not find an effect of the GDP level or the inflow of foreigners. It is clear, therefore, that individual-level predictors are decisive in explaining anti-immigrant sentiments. However, this does not alter the fact that, even under control for these individual characteristics, patterns of television consumption level continue to make a significant contribution.

Discussion

In this article we investigated the relationship between exposure to specific types of television program and broadcaster and the prevalence of anti-immigrant sentiments in society. We observed that both individual and aggregate patterns of television consumption are associated with attitudes towards immigrants. At the individual level, heavy television viewers are more likely to hold negative attitudes towards immigrants, although frequent exposure to information programs counterbalances these attitudes. This confirms the notion that the effect of television is strongly dependent on the type of program that is being watched, and our findings add to the rather pessimistic view of the expansion of entertainment television. Despite some studies indicating that stereotyping also occurs in news broadcasts, a preference for news broadcasts still seems to be negatively related to anti-immigrant sentiments.

At the society level, it seems that in societies where on average more time is being spent on watching television, there are higher levels of anti-immigrant sentiments. It is important to repeat here that this relationship is robust, even after controlling for the time the individual respondent spends watching television. The notion that television also has an aggregate-level effect, extending toward those that do not watch television or only now and then, therefore is clearly supported. In societies where the average time is higher, everyone seems to be affected, even controlling for the respondent's individual viewing habits.

This study thus provides support for the view that when studying the relationship between television consumption and attitudes, one should adopt a multidimensional perspective that distinguishes between specific types of television program and broadcaster. In this way, our study corroborates previous findings that news viewing habits and the amount of time watching television are closely related to civic attitudes. While this relationship was already demonstrated for political knowledge, social and political trust and political participation, our study is the first to systematically address the relationship between differential television consumption habits and anti-immigrant attitudes. For this kind of negative attitude, too, we do find a negative relationship with a preference for news programs. Despite the fact that previous research has highlighted the presence of stereotyping in broadcast news, apparently following the news and being informed about society still reduces anti-immigrant sentiments. To some extent this might be related to higher levels of political interest and knowledge among those who watch the news (although we controlled for respondents' educational level in the analysis and their socioeconomic status and political interest), but there is also clearly no observable relation with stereotyping in news broadcasts. News stations may provide more background information in their broadcasts, and learning about immigrants could provide news recipients with individuating information about these social groups. Literature on stereotypes suggests that individuating information has the potential to erode categorical or stereotypical judgments of social groups.

The explanation for the associations we have found between television consumption and anti-immigrant sentiments, however, is not evident. First, it should be mentioned that our study relies on a *reported* preference and reported habits with regard to watching television. This kind of survey question most likely leads to social desirability, and therefore it would be dangerous to base causal inference purely on this survey question. We have to take into account the possibility that the same motives that drive respondents to report their preferences for information media too positively, might also lead to a biased answering pattern with regard to anti-immigrant sentiments. Content analysis, therefore, should demonstrate more systematically whether there is a difference between various

programs and broadcasters in the way they depict ethnic and cultural diversity in society. A recently published study suggests that in Flanders this is the case: Public broadcasters report in a slightly more positive manner about immigration and ethnic diversity compared to commercial broadcasters, by focusing more on positive advantages of diversity for society (Jacobs et al., 2016). It is important, however, to consider that in countries that are heavily dominated by commercial broadcasting, there is a strong incentive to stimulate the overall level of time that is being spent on watching television. The longer, on average, people watch television, the more potential there is for gathering revenue. The same kind of market logic, however, does not apply to systems that are dominated by public broadcasting, as most public broadcasters are not dependent on revenue for advertisements. Another approach which would strengthen any causal claim in this regard is the adoption of a research design which allows for a direct test of causality, such as a longitudinal or time-series design. Data limitations prevent us from applying such a design, as this kind of data is currently not available, and in future research experimental designs should be envisioned to determine whether the associations we observed in this study might also be explained in a more causal manner.

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Appendix

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Recurrence country in 6 ESS Waves
Austria	X	X	X				3
Belgium (French-speaking)	X	X	X	X	X	X	6
Belgium (Dutch-speaking)	X	X	X	X	X	X	6
Czech Republic	X	X		X	X	X	5
Denmark	X	X	X	X	X	X	6
Estonia			X	X	X	X	4
Finland	X	X	X	X	X	X	6
France	X	X	X	X	X		5
Germany	X	X	X	X	X	X	6
Greece				X	X		2
Hungary	X	X	X	X	X		5
Ireland	X	X	X	X	X	X	6
Italy	X	X					2
Netherlands	X	X	X	X	X	X	6
Norway	X	X	X	X	X	X	6
Poland	X	X	X	X	X	X	6
Portugal	X	X	X	X	X	X	6
Russia			X	X	X		3
Slovakia		X	X	X	X	X	5
Slovenia				X	X	X	3
Spain	X	X	X	X	X	X	6
Sweden	X	X	X	X	X	X	6
Switzerland (French-speaking)	X	X	X	X	X	X	6
Switzerland (German-speaking)	X	X	X	X	X	X	6
United Kingdom	X	X	X	X	X	X	6
Total number of societies per wave	20	21	21	23	23	19	