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# Comparative determinants of horse-race coverage

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We investigate the levels of horse-race coverage in 160 different European print and broadcast outlets in 27 different countries at three different points in time. We match information on outlets' content to survey-based information on the average levels of interest in politics and education of outlets' audiences. We formulate hypotheses concerning journalists' and citizens' preferences over the ideal level of horse-race coverage, as well as hypotheses concerning the information content of horse-race coverage in different party systems. After controlling for the composition of each outlet's audience, we find that horse-race coverage is most frequent in polarized party systems with close electoral contests, and in large markets with professional journalists. These findings challenge the traditional view of horse-race journalism as a 'low-quality' form of news.

**Keywords:** opinion polls; media systems; election coverage

## Introduction

Many scholars have argued that journalism, which covers politics as if it were a horse-race (rather than, say, a contest between competing visions of the just society) demeans politics and causes citizens to become more cynical and less trusting of politics and politicians (Patterson, 1993; Cappella and Jamieson, 1997), at least at certain levels (De Vreese, 2005) or for certain individuals (Valentino *et al.*, 2001). If this is true – and it has been challenged by several authors (Meyer and Potter, 1998; Zhao and Bleske, 1998) – it prompts the question of whether levels of horse-race coverage are determined by systematic factors, and if so, whether current or proposed policies promote or discourage levels of horse-race coverage and thus of political cynicism. While levels of horse-race coverage have increased over time in both Europe (Brettschneider, 1997; Sonck and Loosveldt, 2008; Szwed, 2011) and the United States (Patterson, 1993, but see Sigelman and Bullock, 1991 and Antista *et al.*, 2010), we know little about what drives horse-race coverage. Aalberg *et al.* (2011) claim that '[t]he most important antecedent of the framing of politics as a strategic game [based in part on the use of opinion polls] established thus far, appears to be degree of commercialism'. This finding is also strongly implied by Zaller (1999a, b), but this conclusion, as far as we can tell, is either based on single

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country trends over time, or on comparisons of a small number of polities/markets (Strömbäck and Dimitrova, 2006; Strömbäck and Shehata, 2007; Dunaway, 2008). Such research designs are invariably limited in their ability to test multiple explanations cast at different levels. Though we might – to borrow the title of Strömbäck and Dimitrova's (2006) article – have a strong presumption that 'political and media systems matter', comparable statistics on levels of horse-race coverage are so scarce, and so expensive to collect, that abundant hypotheses concerning the impact of political and media system variables (Hallin and Mancini, 2004) on coverage of politics have not been as rigorously tested as one would hope.

This is doubly regrettable given the variation in political and media systems that exists in Europe. To foreshadow some of the variables we employ later on, we may say that Europe has party systems, which approach perfect two-partyism (Malta) and party systems, which have almost 10 effective electoral parties competing (Belgium); party systems, which deliver extremely close elections (Malta again) and party systems where the plurality 'winner' of the election is rarely in doubt (Poland). Some European media systems are extremely competitive and professionalized, whereas others are bastions of political parallelism and patronage. It would be astonishing if this considerable variation did not affect, in some way, the propensity of news outlets to use information from opinion polls in their news coverage.

In this article, we use media content analysis data from successive European Election Studies (EES) to test nine different hypotheses about the level of horse-race coverage of politics in print and broadcast media. Despite recent increases in internet use, television and newspapers remain the two most important sources of such politically relevant information (European Commission, 2011; Smith and Pew Internet & American Life Project, 2011). How these media portray politics, and thus deliver politically relevant information, is therefore important. We test hypotheses concerning producers of news (journalists), consumers of news (citizens), and the markets and political systems in which journalists and citizens are embedded. EES data allows us to test these hypotheses jointly because of its unparalleled breadth, depth, and consistency over time. We test our hypotheses on data analysing over 58,000 stories drawn from 160 different outlets in 27 countries at three different points in time. Because this content data is linked to EES studies of voters, we are at the same time able to include in our analysis information on the different audiences of all of these outlets. This breadth and richness of data enables us to draw several exciting conclusions. First, at the level of the citizen, more educated citizens and those more interested in politics eschew horse-race coverage. Second, at the level of the journalist, more professional journalists, and journalists in larger markets, use horse-race coverage more. Third, at the level of the party system, more polarized party systems, and party systems with closer elections, see more horse-race coverage.

In order to establish these generalizable relationships between media system characteristics and characteristics of output, we start by clarifying our concept of horse-race coverage, and setting out some behavioural assumptions for citizens

and journalists. Our major theoretical contribution is to look at how features of the party system affect the revelatory character of polling information. That is, we explain why not all polls are equally useful to minimally attentive citizens, but why polls may be more useful in some party systems than others. In following sections, we discuss the data we use in this article and our modelling strategy, respectively. We discuss the significance and substantive magnitude of some of the effects we find, and close by reflecting on the implications of our findings for research on polling effects and the coverage of politics generally.

## Theory

### *The horse-race and other concepts*

The concept of horse-race journalism is extremely old: Broh (1980) cites one description of political competition as a horse-race from the 1880s. Over time, however, the concept has been elided with two other related concepts, the 'game schema' (Patterson, 1993) and the 'strategy frame' (Cappella and Jamieson, 1997), both of which are opposed to a 'policy frame', but which are subtly different. Aalberg *et al.* (2011: 6) helpfully describe the 'game schema', which we believe to be closer to the original use of horse-race journalism, as involving opinion polls, actual and forecast election outcomes, and a language of winners and losers, in contrast to the strategy frame, which involves stories about campaign strategies and tactics, personality and style. When we talk about horse-race coverage, we are therefore talking about something that is closer to the 'game schema' than the 'strategy frame'. However, our understanding of horse-race coverage is narrower than the 'game schema'. We operationalize horse-race coverage as *coverage which makes explicit or implicit reference to public opinion polls*. We do not include coverage, which uses the language of winners and losers, without making such references to polls. This narrowing is, we believe, justified. By using a narrow operationalization, we minimize the risk that our operationalization will capture different concepts across different polities with different journalistic tropes.[1]

### *What do citizens want?*

Citizens vary, both within and across countries, in terms of their interest in politics and their capacity to process political information. This variation affects their preferences over output, and thus (assuming media outlets are minimally responsive) the type of content that is supplied to them. Horse-race stories are cognitively undemanding, as they reduce politics to a single datum – who is ahead? – rather than a complex set of policy proposals, each of which has advantages and disadvantages. Consequently,

[1] Although our operationalization is narrow, it has implications for the 'game schema'. Opinion polls serve as 'news pegs' for talk of winners and losers. It is difficult, though not impossible, to talk of winners and losers without some reference to polling. Consequently, our estimates of horse-race coverage might set a lower bound on the levels of coverage using a 'game schema'.

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relative to other types of political coverage, citizens with lower levels of education ought to prefer horse-race coverage. Horse-race coverage also displaces discussion of substantive policy issues – or at least this has often been the presumption (cf. Meyer and Potter, 1998; Zhao and Bleske, 1998). Insofar as citizens with higher levels of political interest prefer substantive policy discussion, citizens with lower levels of political interest ought to prefer horse-race coverage.

### *What do journalists want?*

Journalists wish to act as active interpreters of the news rather than passive conduits for information supplied by politicians. That is, there is a Rule of Product Substitution (Zaller, 1998): a 'tendency of journalists to substitute their voice for that of politicians in deciding what's news', ostensibly to improve the quality and analytic nature of coverage of politics, but also in part to satisfy professional *amour propre*. The provision and interpretation of polling data allow journalists to interpose themselves between politicians and the public in exactly this way. Polls must be presented, explained, and interpreted in the light of the race thus far.

Journalists vary in the importance that they attach to the Rule of Product Substitution. In particular, we argue that journalists in more professionalized journalistic corps place greater weight on substituting their voice for that of politicians. A wave of recent research on comparative media systems has placed variation in journalistic professionalization at the heart of efforts to classify the world's media (Hallin and Mancini, 2004). Consequently, differences between countries in the level of journalistic professionalization will be associated with differences in the level of horse-race coverage.

### *What do markets permit?*

Markets for news vary in their size and in their degree of concentration. These have effects on the level of horse-race coverage. Commissioning opinion polls is expensive, involving fixed costs. Participants in larger markets will be more able to absorb these fixed costs, and so these markets should feature more horse-race coverage.

The effects of concentration on levels of horse-race coverage are not clear. Insofar as concentration is inversely related to market competition, and insofar as competitive markets satisfy consumer preferences, then we might expect no effect of market concentration once the determinants of consumer preferences (interest in politics and information processing capacity) are controlled for. However, there is a long tradition of thought that argues that market competition in markets for news tends to reward low-complexity output (Dunaway, 2008), perhaps because market operators underestimate citizens' levels of interest in politics or cognitive capacities.[2]

[2] Consider, for example, TS Eliot's statement to the 1962 Pilkington Committee (Pilkington, 1962) that 'those who aim to give the public what the public wants begin by underestimating the public taste; they end by debauching it'.

*What incentives do party systems create?*

As well as wishing to substitute their voice for that of politicians, journalists tend to 'devote attention to occurrences in proportion to their anticipated importance' (Zaller, 1999b). The importance, or *informativeness*, of horse-race coverage differs across political systems. Much of the literature on horse-race coverage has ignored the role of political systems largely because it has been based on single-country studies and mostly in the United States where electoral systems are of little interest. Consequently, we must extend the theory by talking about the role of electoral systems and governments.

We therefore set forward three ways in which the importance of opinion poll revelations might differ across political systems. First, opinion polls might be important, even to rationally ignorant citizens, because they have the potential to reduce uncertainty about who will form the next government. Uncertainty about who will form the next government is composed of uncertainty about the likely distribution of votes (and thus the likely distribution of seats), and uncertainty about post-electoral coalition formation. Opinion polls can reduce uncertainty about the likely distribution of votes, but it cannot reduce uncertainty about post-electoral coalition formation. Uncertainty about post-electoral coalition formation is greater in systems with a larger effective number of parties. Opinion polling does not mitigate this source of uncertainty, and therefore its value is lower in systems with a larger effective number of parties. We may also think that the value of opinion polling relative to other types of coverage – for example, inviting expert commentators to speculate on likely coalition outcomes – is lower.[3]

Second, opinion poll revelations might be important, even to rationally ignorant citizens, because they inform citizens about future shifts in policy. Irrespective of whether voters will be positively or negatively affected by departures from the status quo, they attach greater value to knowing about large departures from the status quo than they do to small departures from the status quo. Other things equal, party systems, which are more polarized have greater potential to result in large departures from the status quo. Information about elections in which large departures from the status quo are possible is more valuable. Therefore, opinion polling in polarized party systems is more valuable.

Third, while opinion polling is valuable insofar as it reduces uncertainty about the vote shares of parties, not all elections are equally uncertain. In some elections, it is relatively clear, even without carrying out polling, who will 'win' the election, in the sense of having a plurality of votes. In such elections, there is less value to opinion polling. Conversely, if there is great uncertainty about who will 'win', the value of opinion polling is much greater. In other words: the closer the horse-race, the more opinion polls feature.

[3] This would not hold for electoral contests with indivisible prizes. For example, opinion polls would still be valuable in primary or presidential elections, even with a large effective number of candidates, because the issue of subsequent coalition formation does not arise.

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We have talked about three ways of relating party system characteristics to citizen interest. The final step in our argument relates this to choices about output. Here, we assume that the same factors that affect the importance of opinion polls for citizens also affect the importance of opinion polls for journalists. That is, if greater complexity surrounding coalition formation makes polls less valuable for citizens, then it also makes it less valuable for journalists.

## Hypotheses

From the preceding discussion, we can formulate certain hypotheses concerning levels of horse-race coverage. These hypotheses are grouped in four categories: hypotheses relating to citizens, hypotheses relating to journalists, hypotheses relating to the market, and hypotheses relating to the political system. Our hypotheses relating to citizens are framed in terms of the citizens who regularly consume a given outlet. We therefore assume that outlets are 'stickers', dedicated to satisfying the needs of their existing audiences rather than identifying new potential audience groups (Laver and Sergenti, 2012).

From the preferences of citizens, which in turn derive from interest and cognitive capacity, we may hypothesize that:

Hypothesis 1: The greater the average level of interest in politics in an outlet's audience, the less likely that outlet is to cover politics as a horse-race

and that:

Hypothesis 2: The greater the average level of education of an outlet's audience, the less likely that outlet is to cover politics as a horse-race.

Our hypotheses relating to journalists concern the level of journalistic professionalism in a country, and the presence of public service broadcasters. We assume that professionalism is generally a characteristic of groups of journalists at the country-level, rather than, say, varying across print and broadcast media. Based on the Rule of Product Substitution, we hypothesize that:

Hypothesis 3: The greater the level of professionalism of journalists in a country, the more likely outlets in that country are to cover politics as a horse-race.

Although there are few good reasons to believe that levels of professionalism vary across media, there are good reasons to believe that journalists in public broadcasters, who have to follow extensive internal guidelines concerning the coverage of politics (Hanretty, 2011), are more professionalized. Consequently – and in contrast to arguments based on the resistance of public broadcasters to commercial pressures (Strömbäck and van Aelst, 2010) or on their positive effects on turnout (Baek, 2009) – we hypothesize that:

Hypothesis 4: Public service broadcasters are more likely to cover politics as a horse-race than other types of outlet.

Concerning the market for news, and based on the assumption that market players typically underestimate citizens' capacity for processing and interest in political information, we hypothesize that

Hypothesis 5: The greater the level of competition in a media market, the more likely outlets in that market are to cover politics as a horse-race.

Because commissioning polling has a fixed cost, and because those fixed costs will be more likely to be met only in larger markets,[4] we also hypothesize that:

Hypothesis 6: The larger the potential market for news, the more likely outlets in that market are to cover politics as a horse-race.

We turn finally to characteristics of the polity, and begin with electoral closeness. In a close election, there is considerable uncertainty over which candidate (or party) will win (win the most seats) in an election. Horse-race stories, whether they discuss opinion polls, strategy, or electoral viability, may act to counter this uncertainty. They are thus more valuable in close elections compared to electoral mismatches, where opinion polls tend only to confirm what was already suspected, and where strategies may only affect the margin of victory, not the outcome. We therefore hypothesize that:

Hypothesis 7: The closer elections in a polity, the more likely outlets in that polity are to cover politics as a horse-race.

The revelatory character of polls also depends on the positions of the parties in competition. Recall that citizens are minimally interested in coverage of politics, and that minimal interest stems from their desire to know how they will be affected by changes in government rather than how they may cast an informed vote. Polls, particularly in *ex ante* close races, are valuable insofar as they reduce uncertainty about *whether* citizens will be affected by a change in the partisan centre of gravity of government or of the legislative majority; but they are also valuable insofar as such changes are likely to be of high magnitude. In systems where alternation in government is not blocked, greater levels of party system polarization mean that changes in the partisan centre of gravity will be of greater magnitude.[5] We extend this reasoning to second-order elections such as European parliament elections. Since polls are more revelatory when the party system is polarized, we hypothesize that:

Hypothesis 8: The more polarized the party system of a polity, the more likely outlets in that polity are to cover politics as a horse-race.

[4] This might be due to bottlenecks in the media market, or bottlenecks in the market for polling and consumer research more generally. In an additional model, we controlled for the effects of having a larger number of ESOMAR (European Society for Opinion and Market Research) members in a given country; this variable was insignificant and did not affect our results. These model results are available on request.

[5] Empirically, the correlation is very slight. Using data from Franzese (2002) for the countries featured in our data, the correlation between polarization and the replacement risk – the standard deviation of the partisan centre of gravity across governments across a period of 9 years centred on the present – for 204 country-elections is significant but low ($r = 0.21$, $p < 0.01$).

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The final characteristic of the polity is the effective number of parties. Framing elections as horse-races between parties is easy to do when the number of parties is limited. However, as the number of parties grows past a certain number, it becomes more difficult to report each party's standing in the polls individually. At this point, the utility of alternative frames becomes greater. Specifically, journalists may prefer to emphasize the coalition nature of politics, and focus on coalition policy proposals (if other factors suggest a high equilibrium level of news quality) or on personal spats within or between coalitions (if other factors suggest a low equilibrium level of news quality). We therefore hypothesize that:

Hypothesis 9: The greater the effective number of parties in a polity, the less likely outlets in that polity are to cover politics as a horse-race.

We discuss the data we use to test these hypotheses, and some additional control variables, in the next section.

## Data

Despite considerable advances in our understanding of media systems and media effects, the comparative study of political communication has been hampered by a lack of comparable measures across years and across countries; by a narrow sample of countries; and by a focus on single media. These problems are unsurprising given the large amount of effort necessary to code media content across multiple countries in multiple languages, and thus far it has not been possible to coordinate country-specific projects as has, for example, been done for the study of comparative policy agendas. The European Election Media Content Analysis project, however, has been capturing and coding campaign media content since the 1999 European Parliament election across all member states allowing an unprecedented collection of media content data. Combining the 1999, 2004 and 2009 EES yields campaign news media content data across 67 election campaigns. The project has captured both television news and newspapers coding in 23 languages and using comparable procedures and measures. These data allow a comprehensive means of testing media system effects on news coverage.

Similar sampling and coding procedures have been used across the three election years (Banducci *et al.*, 2010). Because election coverage clusters around the period shortly before election day (Siune, 1983; Leroy and Siune, 1994; Reiser, 1994), the 3 weeks prior to election day are analysed.[6] Generally, for broadcasting, the main evening news outlets of both the most widely watched public broadcasting and private channels were selected in each country.[7] Newspapers were selected on the

[6] In 1999, television news content from the 2 weeks prior to the election was captured and coded.

[7] There were some exceptions to this general rule. For example, because Belgium is divided into Flemish-speaking Flanders and French speaking Wallonia, evening news programs on the two most widely watched Flemish- and French-speaking channels were included and were analysed separately throughout this study.

basis of reach and partisan leaning where appropriate. Therefore, our sample of newspapers includes a tabloid or popular press and a left and right leaning broadsheet. In 1999, only the front pages of newspapers were coded, whereas randomly selected interior pages were coded in subsequent years. We do not have a random selection of outlets but our sample does cover the most comprehensive list of newspaper and broadcast outlets available for analysis. Our method of selection does yield a sample that achieves broad coverage of a range of newspapers and broadcast outlets across media systems. As press and broadcasting systems changed over the 10-year period, we adjusted the sample to reflect changes as newspapers closed or as private channels became available. For further information on the outlets, see the Technical Appendix (available online).

In the coding procedure the unit of analysis was the single news story, defined as a semantic entity with at least one topic, delimited from other stories by a change of topic. For 1999, 9835 stories were coded across 45 outlets, 45,954 stories form 125 outlets in 2004 and 48,983 stories across 143 outlets in 2009. The increase in the number of outlets mostly reflects the increase in the number of media systems included as the number of member states increased in the European Union but also an increase in the resources available for data collection.

While new measures were incorporated, in general, the main indicators of topics and actors are comparable across the years as the codebook adopted in 1999 was used as the coding scheme in each subsequent year. In each election year, training and coding of the campaign news content took place in one or two (2009) locations in order minimize risks to data loss and maximize control over the integrity of the coding procedure.[8] The news stories were coded by native speakers in country teams, recruited on the basis of native language and English proficiency. Coders were carefully trained before coding and supervized throughout the whole coding period. During the initial training period, coders trained a minimum of 20 stories that were then checked for accuracy before beginning the coding of the captured news content. During the coding period, stories were randomly assigned to the coders. The coder trainers of the country groups were in daily contact to resolve problems. For the reliability testing, coder pairs in each country team coded a minimum of 18 randomly selected television stories per channel.[9]

Additionally, given that no private channels existed in Austria (1999 and 2004) or were of no importance in Ireland (1999), only the public broadcasting channel with the largest reach was included for these two countries. See the technical appendix (available online) for further information on outlets.

[8] In 2004, the capturing and coding of material was carried out by Medien Tenor using the same procedure outlined.

[9] To ensure inter-coder reliability, coders completed initial training and only when their coding was of sufficient quality (assessed by coder tests that were matched with master codes completed by the coder trainer team) did actual coding commence. Given the challenges in cross-national content analysis (see Peter and Lauf, 2002), coders were monitored and intra- and inter-coder reliability tests were conducted. The results of these tests were satisfactory (above 65% agreement) across all years and across all indicators in the codebook. For example, the reliability tests for 2009 demonstrate inter-coder agreement of 0.66 (Krippendorff's alpha) across 53 coders and 35 English language news stories.

### *Horse-race coverage*

Each story was coded as having either no reference to opinion polls (coded as 0), or having a general mention of opinion polls or mention of a specific opinion poll (2004 and 2009 waves); or having a mention of opinion polls either in the context of the European Parliament election or in the context of another topic (1999 wave; all coded as 1). By collapsing these latter categories, we are able to compare the frequency of references to polls – and thus horse-race coverage – over time.

### *Topic*

The topic of each story was also coded. Twenty-two top-level topics are coded in the combined data set. The most important of these, for our purposes, are the topics relating to EU elections and other (i.e. national) elections. References to polls are most common in stories with these topics, though references to polls are also found in other topics, including but not limited to 'party politics', 'EU politics and institutions', and 'foreign affairs and defence'.

### *Market competition*

We use the inverse of the Herfindahl–Hirschmann index (HHI) of concentration as our measure of market competition. This is analogous to Laakso and Taagepera's (1979) effective number of parties, except that it uses market share instead of vote or seat share. We calculate the HHI on the basis of all-day audience shares (television) and daily newspaper circulation shares (newspapers). Data for newspaper concentration come from the 2000, 2005, and 2010 editions of *World Press Trends* (World Association of Newspapers, 2000, 2005, 2010). Data for television audience shares come from the 2000, 2005, and 2010 editions of the European Audiovisual Observatory's Statistical Yearbook (European Audiovisual Observatory, 2000, 2005, 2010). We include all market operators listed in these publications, not just those included in our media content data. Where one ownership group owns two or more outlets, we sum these shares prior to calculating concentration. To give one example: in Sweden in 2009, there were 10 newspapers with non-negligible circulation (Aftonbladet, Dagens Nyheter, Expressen, Göteborgs-Posten, Svenska Dagbladet, Sydsvenskan, Dagens Industri, Helsingborgs Dagblad, Dalarnas Tidningar, and Nerikes Allehanda), owned by nine different groups (Svenska Dagbladet owns and operates Sydsvenskan). These papers had, respectively, 19.7%, 17.3%, 16.0%, 13.0%, 10.8%, 6.6%, 5.6%, 4.2%, 3.3%, and 3.3% of circulation. Summing the two percentages for Svenska Dagbladet and Sydsvenskan, and squaring each of these, gives us an HHI of 1535, or a rather moderate level of concentration. We then take the inverse of this figure. We repeat this process for all countries, for both print and broadcast media, in each of the years covered by our data.

### *Professionalism*

To measure professionalism, we use a recent expert survey (Popescu *et al.*, 2010). Experts in 34 different European media systems were asked to agree or disagree with three statements concerning journalism: 'Journalists in [country] are motivated by an ethic of serving the public interest'; 'Journalists in [country] agree on the criteria for judging excellence in their profession regardless of their political orientations'; and 'Journalists have sufficient training to ensure that basic professional norms like accuracy, relevance, completeness, balance, timeliness, double-checking and source confidentiality are respected in news-making practices'. We took the responses to these questions (on a 0–10 scale) and carried out a principal components analysis, extracting the first principal component and using it as our measure of professionalism across all three time-periods. The measure has strong face validity and matches well the impressionistic judgements of country-level journalistic professionalism reported in Hallin and Mancini (2004).[10]

### *Interest and education*

We use data from the EES of 1999, 2004 and 2009 to measure mean levels of interest and education according to media outlets. A respondent's level of interest in politics is his/her response, on a four-point scale, to the question, 'To what extent would you say you are interested in politics?'. The mean level of interest for each outlet is simply the mean level of interest in politics among regular readers or viewers of that outlet, where a regular reader/viewer is one who watches or reads that outlet at least once a week. A respondent's level of education is the self-reported age at which s/he finished full-time education. The mean level of education for each outlet is constructed in the same way as the mean level of interest for each outlet.

### *Electoral statistics*

We use a number of standard measures of electoral competition. First, we use the effective number of electoral parties (Laakso and Taagepera, 1979), calculated on the basis of vote shares in the 1999, 2004, or 2009 European Parliament elections. Second, we use the degree of polarization, calculated using the method outlined in Dalton (2008) on the basis of various estimates of left-right positions (Castles and Mair, 1984; Huber and Inglehart, 1995; Benoit and Laver, 2006) as reported in Döring and Manow (2010). Third, we use two-party closeness, again calculated on the basis of vote shares in the relevant European Parliament election.[11]

[10] The country figures are as follows: Italy (–2.75); Romania (–2.48); Hungary (–2.39); Cyprus (–2.32); Bulgaria (–2.32); Lithuania (–1.35); Czech Republic (–1.34); Poland (–0.94); Greece (–0.78); Austria (–0.71); Spain (–0.70); Great Britain (–0.24); Slovakia (0.07); Estonia (0.13); Ireland (0.33); Malta (0.52); Slovenia (0.70); Portugal (0.74); Latvia (0.87); France (1.45); Luxembourg (1.81); Netherlands (1.86); Germany (1.94); Belgium (2.17); Denmark (3.57); Sweden (4.05); Finland (4.16).

[11] From the point of view of the media, rather than political science, two-party closeness is preferable, since the focus of attention in the horse-race is on the eventual winner. When we repeat our model using

### *Market size*

To operationalize market size we take the log of the population of each country in thousands, as reported in Heston *et al.* (2011).

### *Out let type*

We classify outlets as either commercial television broadcasters (the baseline category; 36); public service broadcasters (32); tabloid newspapers (17); or 'quality' newspapers (76). We classify public service broadcasters all those broadcasters which are either funded in large part by the state through general taxation revenue or a special hypothecated tax (licence fee); and in which the highest posts are appointed by state organs (Hanretty, 2011: 4).[12]

### *Topic*

Each story was topic-coded at a detailed level (70 topic codes for the 1999 wave; 65 for the 2004 wave; and 148 topic codes for 2009). These detailed topic codes were aggregated into 22 top-level codes, covering EU elections (number of stories = 21,706); Other elections (2968); politics in general (2638); federalism/administration (453); Law and order (6528); EU politics (4253); EU integration (958); Foreign affairs (7905); Economy (8383); the environment (1308); social policy (802); health care (1584); immigration (637); minority issues (62); gender (486); agriculture (1267); education (844); transportation (876); culture (8139); party politics (2682); media (393); and other topics (8689).

### *Weekend*

We include a dummy variable, which has value one for Saturday or Sunday broadcasts/newspapers.

### *Time until election*

We take the log of one plus the number of days until the election as our measure of time until the election.

### *Summary information*

Table 1 displays a list of the continuous variables used in our analysis, the units over which they vary, and assorted summary statistics. These summary statistics are calculated over unique outlet-day-topic combinations, rather than being calculated over the units over which these variables vary.

instead an entropy-based measure of closeness between *n* parties (Endersby *et al.*, 2002), the coefficient is no longer significant.

[12] This excludes certain broadcasters which are described in their own countries as public service broadcasters, such as ITV (UK) or DR2 from the start of 2004 (Denmark). DR2 thus appears once as a public broadcaster and twice as a commercial broadcaster.

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Table 1. Summary statistics

| Variable | Varies over | $x$ | Minimum, maximum | Std. dev. |
|---|---|---|---|---|
| Interest | Outlet, country, year | 1.6 | 0.4, 2.5 | 0.3 |
| Education | Outlet, country, year | 20.1 | 13.8, 27.0 | 2.2 |
| Professionalism | Country | 0.6 | –2.7, 4.2 | 1.91 |
| Competition | Country, year, outlet type | 4.6 | 1, 11.3 | 2.1 |
| Population ('000) | Country, year | 20540 | 397, 82490 | 24064 |
| Closeness | Country, year | 7.3 | 0.05, 39.0 | 5.8 |
| Polarization | Country, year | 0.4 | 0.13, 0.62 | 0.08 |
| ENEP | Country, year | 5.5 | 2.2, 10.8 | 1.8 |

## Analysis

We model the probability of a story containing a reference to an opinion poll using multilevel binomial regression. We therefore take all stories appearing in a given outlet on a given day in a given topic, and consider these as independent Bernoulli trials, which may or may not result in a 'success', or a reference to an opinion poll. We do so accounting for the nested and crossed structure of the data: stories are 'nested' in outlets; outlets are nested in countries; and stories cross outlets and countries in virtue of their membership in common topics. Formally, let $n_{ijk}$ be the number of stories with topic $i$ featured in outlet $j$ in country $k$; and let $y_{ijk}$ be the number of stories with topic $i$, outlet $j$ and country $k$, which contain a reference to an opinion poll. Then, we can model $Y_{ijk}$ as an instantiation of a random variable drawn from a binomial distribution, which can be modelled with linear predictors using a logit link:

$$\begin{aligned} Y_{ik} &\sim \text{Binom}(n_{ijk}, \pi_{ijk}) \\ \text{log it}(\pi_{ijk}) &= \beta_0 + x_{ijk}\beta_1 + u_i + u_j + u_k + \varepsilon \end{aligned}$$

$$\begin{aligned} u_i &\sim N(0, \sigma^2) \\ u_j &\sim N(0, \sigma^2) \\ u_k &\sim N(0, \sigma^2) \end{aligned}$$

where $u_i$ is a topic-specific random intercept, and $u_j$ and $u_k$ are outlet and country-specific random intercepts, and where $\varepsilon$ is drawn from the logistic distribution.[13] Table 2 shows the result of just such a regression, estimated using the `lme4` package in R (Bates *et al.*, 2011). All coefficients for continuous variables are standardized coefficients; standard errors are given in parentheses. Random intercepts are plotted in Figure 1.

We plot the predicted probability of a horse-race story in Figure 2, for all countries in our data, for two topics (EU elections and other elections) and two outlet types (quality newspapers and commercial television). The predicted

[13] This gives equivalent results to a logistic regression using the single story as the dependent variable, rather than a duple of trials and successes, but is computationally more efficient.

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Table 2. Multilevel logistic regression model of horse-race coverage

| Variable | $\beta$ | SE |
|---|---|---|
| (Intercept) | –4.338*** | (0.306) |
| Interest | –0.106* | (0.043) |
| Education | –0.077† | (0.041) |
| Professionalism | 0.299*** | (0.090) |
| PSB | 0.059 | (0.132) |
| Broadsheet | 0.307* | (0.123) |
| Tabloid | –0.329† | (0.183) |
| Competition | –0.113** | (0.042) |
| Population | 0.216* | (0.088) |
| Closeness | 0.080** | (0.029) |
| Polarization | 0.174*** | (0.040) |
| ENEP | –0.005 | (0.047) |
| Weekend | 0.267*** | (0.034) |
| Time until elex. | –0.072*** | (0.018) |
| *N* (stories) | 83561 | |
| *N* (outlet-day-topic triples) | 23464 | |
| % correctly predicted | 0.94 | |
| Geometric mean probability | 0.84 | |
| AIC | 15512.24 | |
| BIC | 15649.31 | |
| Deviance | 15478.24 | |
| Log-likelihood | –7739.122 | |

† = 0.1 level of significance; * = 0.05; ** = 0.01; *** = 0.001.

probabilities were generated with all other variables set to their country and outlet-type means for the 2009 wave to generate the fixed effects, and averaging over the relevant random intercepts.

### *Model fit*

Our model fits the data reasonably well, although the high percentage correctly predicted (PCP) results from a large number of correctly predicted zeros, which would also be correctly predicted by a null model, the geometric mean probability shows that our model performs significantly better than chance. Much of this fit is due to the inclusion of the topic intercepts; the GMP for a model with a topic-intercept alone is also high, at 0.83.

Concerning first those variables related to citizens' interest in and ability to interpret political events, we note that the results bear out our assumption that horse-race coverage is a heuristic supplied to citizens who are less interested in politics and who have lower levels of education. The effect of interest in politics is more significant, both statistically and in terms of its substantive magnitude.

In terms of characteristics of journalists, professionalism is strongly positively associated with horse-race coverage, which supports the rule of product substitution

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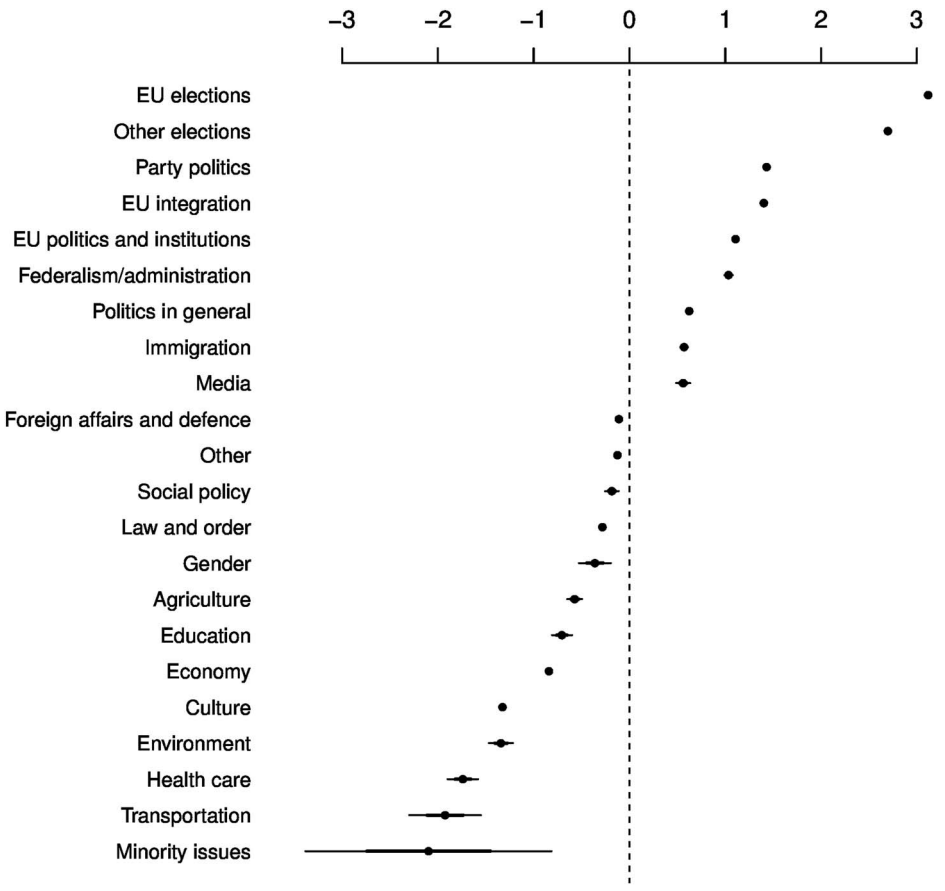


**Figure 1** Plot of random effects for topics.

discussed above. This effect is highly significant, and has the largest magnitude of all of the (standardized) effects shown here. Moving from Italian levels of journalistic professionalization (–2.75; –1.77 after standardization) to Swedish levels of journalistic professionalization (4.05; 1.78 after standardization) makes it roughly four times more likely that a story will feature a reference to polling. Put differently: in terms of the effects we find with respect to horse-race coverage, Sweden is to Italy as quality broadsheet newspapers are to commercial television.

Characteristics such as the type of outlet are included in our next block of coefficients, which relate to the markets in which journalists and citizens are embedded. Viewing poll references from the point of view of producers, the rule of product substitution led us to expect that public service broadcasters, *qua* employers of more professional journalists, would be more likely to feature horse-race coverage, but this hypothesis is not supported by our model. However, significant effects of outlet type do matter for the newspaper market, where quality

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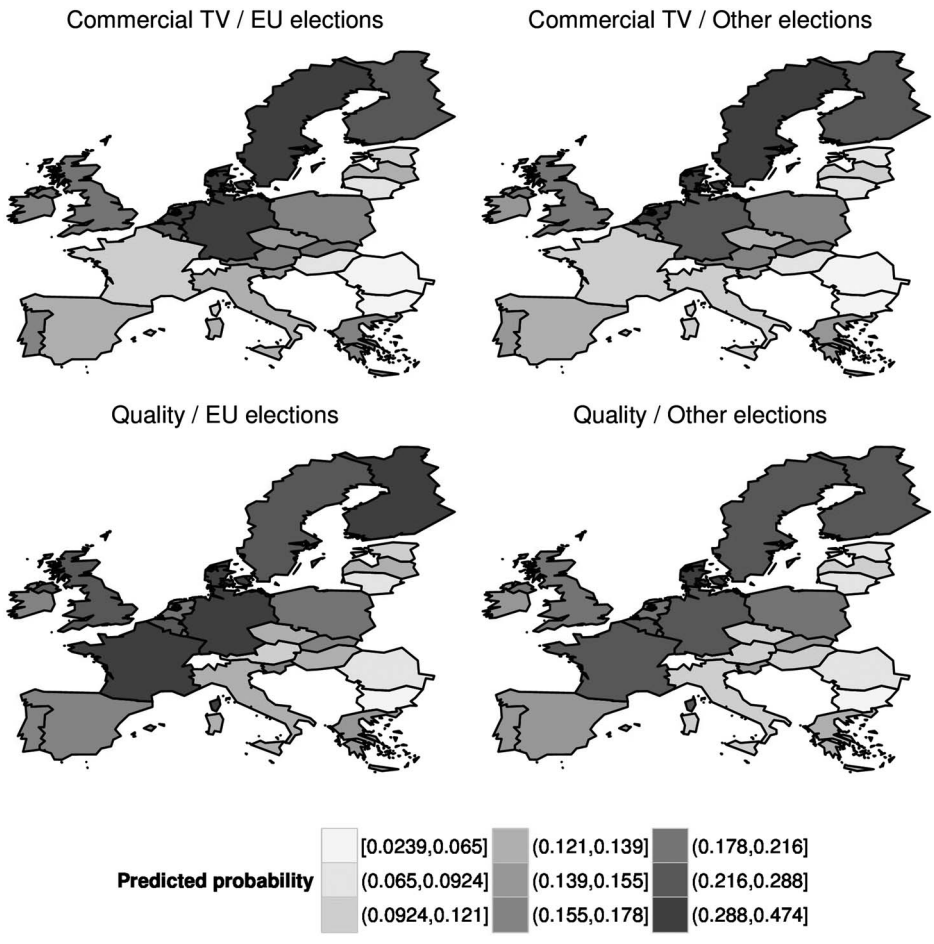


**Figure 2** Predicted probabilities of horse-race coverage by country.

newspapers are more likely than the baseline category (commercial television) to feature horse-race coverage, and tabloid newspapers are somewhat less likely (again, relative to the baseline of commercial television). Thus, even controlling for the differences in political interest between, say, broadsheet and tabloid readers, broadsheets are more likely to feature polls. As expected, the size of the market in which journalists and citizens are embedded matters, with outlets in bigger markets better able to finance the fixed costs of commissioning opinion polls. However, the degree of competition in the market for news has the opposite effects. Contrary to what many have suggested, greater market competition actually leads to less horse-race coverage rather than more. The magnitude of this effect is not large compared with the effects of journalistic professionalism, but is still important: moving from the average levels of concentration found in the print media, to the

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(on-average higher) average levels of concentration found in broadcast media (a difference of nearly 0.6 units on our transformed scale) makes it half as likely that a story will feature a reference to a poll. In terms of our control variables, weekend coverage is far more likely to feature reference to polls, since there is less raw news material with which polls must compete; and days closer to the election feature more horse-race coverage: though this effect is one of the smallest significant effects we find.

Our last block of coefficients concerns the political system. As expected, closer, more polarized elections attract more horse-race coverage. Our prediction regarding the effective number of parties was not, however, borne out.

## Conclusion

Our findings result from an analysis of EES; and we believe a comparative study of this size – considered both diachronically and synchronically – is only possible when leveraging coordinated studies like the European Election Study series. We began by this paper by discussing the role of horse-race coverage of politics in fomenting cynicism towards and distrust of politics, and arguing that if this link holds, it is important to investigate the determinants of levels of horse-race coverage, and to do so in a comparative fashion. We then went on to discuss factors relating to the supply, production, and consumption of political news and horse-race news in particular. We argued in particular that journalists vary in professionalism, citizens vary in interest, and party systems vary in the extent to which horse-race coverage helps citizens. We provide three novel findings: first, market competition works to decrease horse-race coverage rather than increase it; second, the product substitution effect seems to dominate with respect to the supply of horse-race coverage, and so making journalists more professional will only make them more likely to cover politics as a horse-race; and third, polarized party systems characterized by top-two-party closeness encourage horse-race coverage.

Our findings are important because they show that exposure to opinion polls is not distributed uniformly across countries, or across individuals. Consequently, any literature that attempts to identify the effects of exposure to opinion polls – for example, the creation of bandwagon or underdog effects, or spirals of silence – will need to account for these differences in exposure. To the extent that there is a bandwagon or underdog effect, or to the extent that there are spirals of cynicism, these effects will be greatest in those groups who have been most exposed to horse-race reporting, namely readers of quality publications, who nevertheless are not overly interested in politics, who live in large countries with a professionalized journalistic corps. Analyses that are unable to control for exposure will consequently underestimate these effects.

Our findings touch only on a part of the media's portrayal of politics. We have suggested that horse-race coverage is something that quality outlets staffed by

professional journalists resort to, and to this extent we identify 'culprits' other than the usual suspects. However, we leave open the issue of whether horse-race coverage crowds out other kinds of political coverage. We have, in our models, included the effects of topic, and so we can be sure that our findings with respect to higher or lower levels of horse-race coverage are not an artefact of higher or lower levels of coverage of politics. However, within that broad area of coverage, there are many different ways of reporting on politics. For low-quality outlets, one choice might be between running a straight news story or a horse-race story. For high-quality outlets, the choice might be between running the straight news story plus either the horse-race story or a policy analysis story. If horse-race coverage were to crowd out the latter type of story, we would have to question why more professional journalistic corps are more likely to use horse-race coverage.

Our findings do not lead to any clear policy recommendations. They do show that it is simplistic to regard horse-race coverage as 'bad' or 'undesirable' coverage, since it is functional for low-interest citizens, and is produced by journalists who in other respects produce very 'good' or 'meritorious' coverage. Any intervention that aimed at reducing the level of horse-race coverage in order to reduce cynicism and boost turnout might therefore reduce the overall levels of quality in the coverage of politics. We can only caution that, as far as the quality of coverage of politics is concerned, going to the horse-race need not imply going to the dogs.

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## Supplementary Material

To view supplementary material for this article, please visit http://dx.doi.org/10.1017/S1755773913000271.

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