

Did you see it coming? Explaining the accuracy of voter expectations for district and (sub)national election outcomes in multi-party systems

Philippe Mongrain

Keywords:

Canada
France
Germany
citizen forecasting
voter expectations
wishful thinking

Electoral Studies, accepted
2020

ABSTRACT

The expectations of voters regarding election outcomes appear to be mostly influenced by their own political preferences. This raises two important questions. First, once partisan predispositions have been accounted for, how much do other variables like interest in the campaign, election news attentiveness, political knowledge, education or competitiveness help to explain one's ability at predicting election outcomes? Second, does one's level of sophistication moderate the link between political preferences and forecasting abilities? To answer these questions, I mobilize data from seven elections taken at the district and (sub)national levels. I also introduce a new measure of forecasting ability—the cumulative Brier score index. In most cases, variables other than preferences and knowledge have little or no influence on the accuracy of voters' expectations both at the (sub)national and district levels. Political knowledge is positively associated with citizens' forecasting abilities; however, it does not appear to moderate the preference–expectation link. This result contradicts findings from existing work and holds important implications for the study of citizen forecasting.

1. Introduction

A number of studies have considered the effect of political attitudes, information, knowledge (or sophistication), socio-demographic characteristics, social interactions, and contextual factors on individuals' forecasting skills (e.g., Dolan and Holbrook 2001; Lewis-Beck and Skalaban 1989; Lewis-Beck and Tien 1999; Leiter et al. 2018; Leiter, Reilly and Stegmaier 2020; Meffert et al. 2011). The role of affect (i.e., partisan preferences) and cognition (i.e., knowledge and information) is central to most studies of voters' expectations and forecasting abilities. The important influence of affect is a consistent finding across studies: people tend to have high expectations for their favourite party or candidate. As mentioned by Krizan, Miller and Johar (2010, 140), “links between preferences and expectations have been documented with regard to a variety of social and political events [...] and constitute one of the most robust findings in social psychology.”

The expectations of voters regarding election outcomes appear to be mostly influenced by their own political preferences. This raises two important questions. First, once partisan predispositions have been accounted for, how much do other variables like interest in the campaign, election news attentiveness, political knowledge, education, or competitiveness help to explain one's ability at predicting election outcomes? Second, does one's level of sophistication moderate the link between political preferences and forecasting abilities?

In order to answer these two questions, the present paper examines the association between individual-level as well as contextual-level variables and the accuracy or correctness of voters' expectations in the context of multi-party elections across three countries, namely Canada, France, and Germany. For each of these countries, I have information on voters' expectations both at the district and (sub)national levels. Knowing which factors enhance or decrease citizens'

ability to anticipate election outcomes is essential if we wish to achieve a full understanding of the processes that underlie voting behaviour. As stated by Murr (2013, 1), “expectations serve as a premise for behaviour.” Electoral expectations (whether they are accurate or not) can indeed influence the way people vote or even their intention to turnout (Stephenson, Aldrich and Blais, 2018). According to Cox (1997, 72), one of the central assumptions of strategic voting models is “that voter beliefs about which candidates are stronger and weaker are generally correct.” The gap between expectations and outcomes could also affect voters' attitudes such as their satisfaction with democracy or their feeling of political efficacy—however, to date, almost no research has investigated this question (but see Umit 2019). Hence, if we want to understand why individuals act the way they do, it is not sufficient to uncover the reasons behind their (sincere) preferences; we also need to investigate where their expectations come from and what causes them to be accurate or inaccurate.

In their study of voters' national- and state-level expectations in American presidential elections, Dolan and Holbrook (2001, 43) concluded that “there is little doubt that the process of making political judgments is a complex one, driven both by affect and cognition.” The results of the current study support this assertion: although political preferences play a major role in the formation of expectations, I find that very high levels of sophistication can indeed exert quite a substantial influence on the accuracy of voters' expectations. However, the role of political knowledge should not be overstated: party identification and citizens' evaluations of parties and coalitions remain the major drivers of expectations among voters. Furthermore, the influence of partisan preferences on forecasting skills does not appear to be moderated by one's level of objective political knowledge. This is an important finding that underlines the resistance of biased reasoning.

In addition to testing conventional explanations of

forecasting ability across different political and electoral settings, this paper also seeks to provide methodological guidance for future work in the citizen forecasting field. In contrast to most studies of voters' expectations, the paper explicitly acknowledges the hierarchical structure of district-level data through the use of multilevel analysis. Using the multilevel modelling approach, it is possible to take into account specific contextual factors such as the level of competitiveness in a race. Furthermore, most research on citizen forecasting considers voters' forecasts as being either right or wrong (correct or incorrect) which necessarily leads to a considerable loss of information. In this paper, probabilistic estimates of candidates' chances at the district level are transformed into a meaningful indicator of forecasting ability—the cumulative Brier score (CBS) index. This new index represents a much more finely-grained indicator of forecasting ability than the usual binary measure.

Note also that the conclusions of the current study rest on solid ground: the analyses rely on data from seven (sub)national elections in three different countries with traditions of single-party and coalition governments as well as more than 800 district-level races. This diversity should give us more confidence in the generalizability of the results.

The paper proceeds as follows. Section 2 reviews the main explanations that have been proposed to account for varying levels of individual competence in forecasting election outcomes. Section 3 describes the data and methods used to analyse the relationship between various individual-level as well as contextual-level factors and forecasting ability at the district level and the (sub)national level. Section 4 presents the results of the empirical analyses. Finally, section 5 summarizes the main findings and discusses potential avenues of research for future studies.

2. Explaining individual forecasting ability

Citizen forecasting implies asking potential voters which candidate, party, or coalition they expect to win in an election or what the final distribution of votes or seats will look like. Studies of American and British elections have shown citizen forecasting to be an efficient prediction tool (Graefe, 2014; Johnston, Hartman and Pattie, 2019; Lewis-Beck and Stegmaier, 2011; Miller et al., 2012; Murr, 2011, 2015, 2016). There is also some evidence that citizen forecasting might actually outperform other predictive approaches, such as vote intention polls, election betting markets, experts' judgment, and quantitative models (Graefe, 2014; Miller et al., 2012; Murr, Stegmaier and Lewis-Beck, 2021).

Scholars usually consider the success of citizen forecasting as a manifestation of the 'wisdom of crowds' principle (see Murr 2017). According to this principle, groups should yield better decisions or predictions than scattered individuals because they benefit from the aggregation of independent judgments into a collective output (Surowiecki, 2004). The 'wisdom of crowds' principle implies that most citizens

do better than random guessing. Explanations in terms of aggregation do not tell us much, however, about the influence of individual- and contextual-level factors on forecasting ability. The studies that have directly addressed the influence of context as well as personal characteristics and attitudes have identified a wide array of potential factors that could enhance (or decrease) forecasting abilities. But evidence from existing studies can be somewhat mixed and rarely provides cross-national comparisons. Regional-level elections and district races are also rarely considered.

A first set of explanations focuses on the impact of political (or campaign) interest, media exposure, and political knowledge (or sophistication). Interest in the campaign, news attentiveness, and political knowledge should make it easier for citizens to anticipate election outcomes. Indeed, we can expect that voters who closely follow political developments and election campaigns possess vast amounts of relevant information from which they can draw to make thoughtful forecasts.¹ However, existing studies offer only mixed evidence regarding the effect of these variables on forecasting skills (Dolan and Holbrook 2001; Guinjoan et al. 2014; Leiter et al. 2018; Leiter, Reilly and Stegmaier 2020; Meffert et al. 2011; see Anderson, McGregor and Pruyers 2020 for a rare study of forecasting ability at the municipal level). In most cases, political interest and media exposure do not seem to matter. In contrast, political sophistication and factual knowledge have been found to exert a positive influence on forecasting abilities in the context of American presidential elections (Dolan and Holbrook, 2001) as well as specific elections in Sweden (Sjöberg, 2009), Austria, and Germany (Ganser and Riordan, 2015; Meffert et al., 2011)—however, Daoust, Durand and Blais (2020) failed to find any statistically significant effect of factual knowledge on forecasting skills in the 2015 Canadian federal election.

A second set of explanations underlines the importance of partisan predispositions on voter expectations. Party identification and candidate preferences can have a profound influence on citizens' beliefs about the chances of political contenders. Unsurprisingly, citizens who express a sense of attachment to the eventual winner(s) are more likely to correctly predict the outcome of an election than those who prefer or identify with one of the losing parties (Dolan and Holbrook, 2001; Lewis-Beck and Tien, 1999; Meffert et al., 2011). This effect can be attributed almost entirely to wishful thinking or 'my-side biases.' As Baron (2014, 20) specifies, my-side biases "favor whatever possibilities are already strong (options, beliefs, or goals) [and] thus lead to irrational persistence in the face of counterevidence or counterarguments." Feelings of closeness or attachment to a party or candidate can considerably bias individuals' judgments and evaluations related to politics. Hence, one of the most important questions regarding voters' expectations is, to quote Hayes (1936, 186), "did [people's] wishes 'father

¹Obviously, news attentiveness alone does not tell us anything about the type of content (and the tone of the content) to which an individual is exposed. On the impact of partisan election coverage on voters' expectations, see Searles, Smith and Sui (2018).

their thoughts?’” The tendency to overestimate the likelihood that one’s preferred scenario will come about might be due to motivated reasoning—information supporting the preferred scenario appears more salient and believable than information pointing in another direction (Kunda, 1990; Madson and Hillygus, 2020)—or to a ‘projection’ or ‘false-consensus’ effect which leads people to assume that most of their fellow citizens share their views and opinions—and, hence, intend on voting the way they do (Delavande and Manski, 2012; Granberg and Brent, 1983). We would also expect wishful thinking to arise “from the selective sample of associates and information sources, such as newspapers and blogs” (Miller et al., 2012, 1023). In other words, those living in ‘echo chambers’ are less prone to come across ideas and arguments that question their personal beliefs and preferences. Since wishful thinking is a psychological mechanism, it is perhaps not surprising that its effect has been noted in various political systems. As mentioned by Graefe (2014, 208), “[w]ishful thinking occurs in all types of elections, from local referenda to national elections, and across various countries.”

Socio-demographic characteristics are also considered as a potential source of influence on forecasting abilities. Age and gender are usually added as controls in models of forecasting skills but there do not seem to be any clear and consistent patterns of differences between men and women or older and younger voters (Daoust, Durand and Blais, 2020; Dolan and Holbrook, 2001; Leiter et al., 2018; Leiter, Reilly and Stegmaier, 2020; Meffert et al., 2011). Contrarily to age and gender, education usually stands out as an important factor in explaining the forecasting ability of individuals: highly educated citizens are more likely to anticipate electoral outcomes than less educated citizens. The highly educated tend to be exposed more frequently to a diversity of opinions and are perhaps more qualified to judge and evaluate the information they encounter (Dolan and Holbrook, 2001; Granberg and Brent, 1983; Lewis-Beck and Skalaban, 1989; Lewis-Beck and Tien, 1999; Miller et al., 2012; Stiers and Dassonneville, 2018). According to Lewis-Beck and Tien (1999), education matters not so much because of the political knowledge and learning abilities acquired in school, but because of the more extensive social networks that usually come along educational attainment. Hence, the highly educated should benefit from the information inputs of frequent and diversified social interactions (Lewis-Beck and Tien, 1999).

According to a number of studies, partisan biases are less influential among certain groups of voters. Blais and Bodet (2006) suggest that the politically sophisticated rely more heavily on objective information, such as the national polls and previous district-level election results, to form their expectations about winners and losers. The least aware are more inclined to base their expectations on their own political preferences. By interacting the party evaluations and coalition preferences of Austrian and German voters with their level of political knowledge and education, Meffert et al. (2011) have shown that knowledge and educational

attainment reduce people’s tendency to let their preferences drive their expectations (but see Babad 1995). Hence, there is also a potential interaction effect between political knowledge (or sophistication) and partisan preferences. Just as political knowledge or sophistication, education is expected to have a moderating effect on the relationship between partisan predispositions and forecasting skills. In a study of Flemish voters, Stiers and Dassonneville (2018) conclude that the more educated are less prone to wishful thinking and tend to overestimate their favourite party’s vote share to a lesser extent than others.

Although the previous discussion has focused on individual-level explanations of forecasting abilities, election results themselves might also explain the relative ease or difficulty of guessing an election outcome. Guessing the outcome of an election should be easier if the degree of party competition is low. Tight races and marginal seats should be more challenging for citizens, while lopsided elections and safe seats should generally offer a much clearer picture to voters (Dolan and Holbrook, 2001; Johnston, Hartman and Pattie, 2019; Leiter, Reilly and Stegmaier, 2020; Murr, 2011). The number of parties or candidates taking part in an election can also add to the difficulty of the forecasting task (see Murr 2011, 779). Hence, the electoral context needs to be accounted for.

3. Hypotheses

The various explanations discussed in the previous section lead to a number of testable hypotheses. First, we can expect that citizens who show interest in a campaign, who are attentive to election news, and who possess higher levels of political knowledge will be more aware of campaign dynamics as well as more apt at handling political information. In other words, those individuals should have higher levels of political information. This, in turn, should enhance their ability to assess the popular support and winning chances of political contenders. It is possible, however, that election news attentiveness plays a less important role in local races. Media coverage of politics usually focuses on national political actors and events (Carty and Eagles, 2000). As a consequence, district-level campaigns might represent poorer information environments.

H1: Voters who detain higher levels of political information will be more likely to correctly forecast the outcome of an election.

As we have seen, a large body of research rallies around the conclusion that people tend to overestimate the chances of their favourite party or candidate. Consequently, we should find that people identifying with the winning party or candidate (particularly if that identification is strong) are more likely to make a correct forecast (and, conversely, that voters who side with one of the eventual losers are more likely to make an incorrect forecast). This, however, should not be interpreted to mean that partisans of the winning party are better forecasters than non-partisans.

Their forecasting ability is most likely the effect of wishful thinking than that of any special aptitude or particular knowledge.

H2: Voters who strongly identify with (or prefer) the eventual winner(s) will be more likely to correctly forecast the outcome of an election than voters who strongly identify with (or prefer) one of the eventual losers.

In line with previous work, we also expect individuals with higher levels of education to deliver more accurate forecasts than those who possess lower levels of education. Highly educated individuals should be endowed with more of the cognitive resources needed to process complex information.

H3: Highly educated voters will be more likely to correctly forecast the outcome of an election than less educated voters.

As already mentioned, certain characteristics might help voters to overcome their partisan biases. The impact of party identification on forecasting abilities should be weaker among more politically knowledgeable citizens. The forecasts of voters with high levels of political knowledge who report a sense of attachment to a party (including to one of the eventual losers) should be less influenced by affect and more by cognitive judgements, leading to better ('fact-based') predictions.

H4: Political knowledge will weaken the impact of party identification on voters' forecasting abilities.

Finally, the level of competitiveness can also play a part in facilitating (or hindering) voters' ability to produce correct forecasts. Note that the potential influence of competitiveness will only be considered in the case of district-level races since there is no variation in competitiveness at the (sub)national level in the current study (as there is only one election per country/region).

H5: Voters will be more likely to correctly forecast the outcome of an election in less competitive races.

The next section describes the data, coding scheme, and methods used to fulfil the goal of this article.

4. Data and methods

4.1. Cases and datasets

The present research uses data from the Making Electoral Democracy Work (MEDW) project's (see Blais 2010) pre- and post-election surveys. The MEDW datasets include vote expectation items both at the district and (sub)national levels as well as a variety of questions probing for socio-demographic status, information-seeking habits, and political attitudes for seven elections across three

different countries, namely (1) the 2011 Ontario provincial election, (2) the 2012 Quebec provincial election, (3) the 2015 Canadian federal election, (4) the 2012 French legislative election, (5) the 2013 Bavarian state election, (6) the 2013 Lower Saxony state election, and (7) the 2013 German federal election. For the 2015 Canadian federal election, MEDW surveys were conducted in the three largest provinces of the country, that is British Columbia, Ontario, and Quebec. For the 2012 French legislative election, MEDW surveys were conducted in the Île-de-France and Provence-Alpes-Côte d'Azur (PACA) regions. For the 2013 German federal election, MEDW surveys were conducted in the two largest states, that is Bavaria and Lower Saxony (Bavarian voters are, however, overrepresented in that sample—they account for 83 per cent of all German respondents). Table A1 in the appendix (section A) briefly describes the outcome of each of the regional or national elections considered in the current study. Almost all of these elections resulted in complete or partial government changes: as such, they represent an ideal set of elections for studying the determinants of citizens' forecasting skills as anticipating change is probably a harder test than anticipating continuity. Note that all district-level outcomes examined in the current study are decided based on a single-member district (SMD) plurality voting system (more precisely a two-round SMD majority system in the case of France). It is also important to note that (sub)national vote intentions across these elections were relatively stable over the MEDW interview period for each election. Hence, it is safe to rule out important polling effects on voters' expectations for the elections under study (for a more extensive discussion of polling during these elections, see section G of the appendix).

4.2. Dependent variables

4.2.1. (Sub)national-level forecasts

Depending on the country and type of election, surveys from the MEDW project asked respondents to make qualitative forecasts (i.e., which party or ideological branch—Left or Right—will get more votes or seats) or probability forecasts (i.e., how likely is a coalition of parties to win). For the 2011 Ontario provincial election, the 2012 Quebec provincial election, the 2015 Canadian federal election, and the 2012 French legislative election, all vote expectation questions at the (sub)national level were qualitative in nature. For the Canadian federal and provincial elections, respondents had to identify which party they believed would win the most seats. For the 2012 French legislative election, respondents were asked which *family* of parties (i.e., Left or Right) would get most seats in the National Assembly. For the German federal and state elections, respondents were shown possible coalition agreements and asked how likely each coalition were to form the government on a scale ranging from 0 to 10.

The differences in forecasting tasks (and question wording) reflect the different nature of electoral outcomes in the three countries. For the 2011 Ontario provincial election, the 2012 Quebec provincial election, the 2015 Canadian federal

election, and the 2012 French legislative election, forecasting accuracy can be easily operationalized as a dichotomous indicator: respondents who correctly identified the seat plurality winner are attributed a value of 1, while others (including those who gave ‘don’t know’ answers) receive a value of 0. In order to keep the operationalization of the dependent variable as uniform as possible across all elections, German respondents’ expectation scores are dichotomized as well: hence, for each respondent, the coalition with the highest expectation score is considered as the predicted coalition agreement. Respondents whose coalition forecast matches the actual coalition that formed following the election are scored 1, while those who assigned the highest expectation to another coalition agreement are scored 0. Respondents who assigned the highest probability to more than one coalition agreement are treated as ‘don’t know’ answers.

4.2.2. District-level forecasts

For district-level outcomes, vote expectation items in Canada, France, and Germany were all probabilistic in nature. Respondents were asked to assess the chances of winning for each party candidate on a probability scale ranging from 0 to 10.²

The accuracy of probability forecasts is commonly measured using the half-Brier score (see, e.g., Jackson 2018, 623; Mellers et al. 2015a; 2015b; Miller et al. 2012), that is the average of squared deviations between forecasts and the actual outcome, scored as 0 if the forecasted event does not occur and 1 if it occurs (see Wilks 2011, 331). Equation 1 shows how to compute the half-Brier score (BS)—later simply referred to as the Brier score—for binary events such as election campaigns, where parties or candidates usually either win or lose:

$$BS = \frac{1}{n} \sum_{i=1}^n (f_i - o_i)^2 \quad (1)$$

in which f_i is the forecasted probability, o_i is the actual outcome of the event at instance t , and n is the number of forecasting instances (or forecast-verification pairs).

For the present study, this equation can be simplified to $(f_t - o_t)^2$ since each respondent makes only one probability forecast by potential outcome. The Brier score ranges from 0 to 1, 0 indicating a perfect forecast and 1 the worst possible forecast. For example, if a person gives a 100 per cent chance of winning a district to Party A ($f_t = 1$) and Party A wins ($o_t = 1$), then the Brier score is 0, the best possible score. However, if Party A loses ($o_t = 0$), then the Brier score is 1, the worst possible score.

Although computing the Brier score is straightforward, operationalizing the accuracy or quality of probability forecasts for multiple potential outcomes can raise a number of

issues. Most notably, respondents might distribute probabilities incorrectly, for example by giving a 90 per cent chance of winning to two different parties or candidates. All probabilities assigned should normally add up to 100 per cent.

Since MEDW respondents are asked to make a probability forecast for multiple candidates in their local electoral district, their forecasting accuracy can be measured by adding the Brier score of each potential outcome (to ease interpretation, I subtracted the sum of Brier scores from 1 so a score of 1 represents a perfect forecast). As an example, imagine three parties compete in an election (i.e., Party A, Party B, and Party C) and a respondent assigns a 60 per cent chance of winning to Party A, a 30 per cent chance to Party B, and a 10 per cent chance to Party C. If Party A ends up winning the election, then the respondent’s overall accuracy score would be equal to 0.74 (i.e., $1 - [(0.6 - 1)^2 + (0.3 - 0)^2 + (0.1 - 0)^2]$). In contrast, a respondent who assigned the exact same probability of winning to Party A (i.e., 60 per cent), but a 40 per cent chance to Party B and a 0 per cent chance to Party C would receive an overall score of 0.68 (i.e., $1 - [(0.6 - 1)^2 + (0.4 - 0)^2 + (0 - 0)^2]$). To ensure probabilities add up to a maximum of 1, respondents’ assigned probabilities (their ‘raw’ expectations) are normalised by dividing each potential outcome’s raw score by the sum of all raw scores the individual assigned.³ The sum of normalised Brier scores (which I refer to later as the ‘cumulative Brier score index’) ranges from -1 to 1, -1 indicating the worst possible forecast and 1 a perfect forecast. Equation 2 shows how to compute the cumulative Brier score (CBS) index:

$$CBS = 1 - \sum_{i=1}^k (f_i - o_i)^2 \quad (2)$$

in which f_i is the forecasted probability of winning for party i , o_i is the actual outcome of the election for party i , and k is the number of parties for which a probability forecast is made.

4.3. Independent variables

For the seven elections considered here, data were gathered from the MEDW datasets for (1) campaign interest, (2) election news attentiveness, (3) political knowledge, (4) party identification, (5) education, (6) age, (7) gender, and (8) time of interview. Age (in years), gender (0 = female, 1 = male), and time of interview (i.e., the number of days before the election) are treated as control variables.

Interest for the election in the MEDW surveys is measured on a 0–10 scale ranging from ‘no interest at all’ (0) to ‘a great deal of interest’ (10). Election news attentive-

²French respondents were asked to rate the chances of each party candidate in the second round *before* the first round results were known.

³For example, if a respondent assigns a 90 per cent chance of winning to Party A, an 80 per cent chance to Party B, and a 30 per cent chance to Party C, the sum of raw expectations is equal to 200 (i.e., 90 + 80 + 30). Hence, normalised expectations are equal to 0.45 (90/200) for Party A, 0.40 (80/200) for Party B, and 0.15 (30/200) for Party C.

ness is measured on a 0–10 scale ranging from ‘no attention at all’ (0) to ‘a lot of attention’ (10) for each of the following news outlets: television, newspapers, the radio, and the internet. I take the highest value on these four scales as the measure of respondents’ exposure to election news. Across all of the election surveys considered in this study, two items are repeatedly found and can be used to measure respondents’ level of factual political knowledge. The first of these items asks respondents to match pictures of party leaders with the appropriate party. The second item asks respondents to match political parties with the promises they made during the campaign. Each correct answer was coded 1 and each incorrect one (including ‘don’t know’ and missing answers) 0. The range of the factual knowledge scale varies across elections since the number of questions or correct possible answers per question varied. The results, however, are expressed in a way that allows comparisons between cases.

Respondents’ party identification and the strength of their party attachment are used to construct an indicator of wishful thinking. Respondents are first categorized according to one of three possible situations, that is (1) the winner of the election is different from the respondent’s party identification, (2) the respondent reports no party identification, or (3) the winner is similar to the respondent’s party identification.⁴ For (sub)national-level outcomes in the Canadian federal and provincial elections, the winner is the party that captured the most seats in parliament. For the 2012 French legislative election, parties that belong to the ideological branch that won most seats in the National Assembly are considered as winning parties (whether or not they entered the government afterwards). For coalition forecasts in Germany, respondents are considered to be on the ‘losing side’ if their identification does not match one of the coalition partners and on the ‘winning side’ if their identification corresponds to one of the coalition parties (for example, respondents who identify with the SPD and the Green Party would both be considered as being on the winning side if a ‘red–green’ coalition agreement was reached after the election). At the district level, the winner of the election is the local candidate that won most votes. Those identifying with a party are then categorized according to how close they consider themselves to the party they identify with (i.e., not very close, somewhat close, or very close).⁵ Finally, these two pieces of information are combined to form a five-point scale ranging from ‘strong loser party identification’ (1) to ‘strong winner party identification’ (5). Coalition preference being perhaps a more sensible measure of wishful thinking in the context of the German surveys in which respondents were asked to

evaluate the probability of potential coalition agreements, I alternatively measure wishful thinking at the (sub)national level in Germany through a five-point coalition preference scale ranging from ‘strong loser coalition preference’ (1) to ‘strong winner coalition preference’ (5). The middle point on these two scales indicates no party identification or no coalition preference. Party and coalition ratings on a 0–10 ‘like–dislike’ scale as well as a nominal variable for party identification were also used as alternative measures of political preferences in additional analyses (see sections D and E of the appendix). These alternative measures globally confirm the biasing power of preferences.

Since education was measured on a different scale in each country, education levels were grouped in three categories, that is ‘low’ (1), ‘medium’ (2), and ‘high’ (3).

For district-level outcomes, competitiveness was measured in two alternative ways, that this by computing the effective number of electoral parties (ENEP) and the margin of victory. The ENEP was computed for each district by dividing 1 by the sum of the squares of proportions of votes won by each party (see Laakso and Taagepera 1979). The margin of victory was computed in each district by subtracting the vote share won by the second-place candidate from the vote share won by the SMD winner.

As already mentioned, time of interview or closeness to election day is included in the models as a control. Respondents usually have no or almost no control over the precise moment at which they are interviewed, but this variable can nonetheless influence their forecast. Voters normally have a clearer idea of candidates’ or parties’ chances near election day than they do weeks or months before. They have more information to draw on and public opinion measures such as vote intention polls generally gain in accuracy as election day approaches. Hence, distant forecasts should be less accurate than more recent ones (Daoust, Durand and Blais, 2020; Dolan and Holbrook, 2001; Gimpel and Harvey, 1997; Leiter et al., 2018; Lewis-Beck and Skalaban, 1989; Lewis-Beck and Tien, 1999; Nadeau, Niemi and Amato, 1994). Time of interview was used to measure the absolute distance (in days) before the election.

The MEDW survey for the 2015 Canadian federal election includes some questions about respondents’ exposure to polling information at the (sub)national level. The MEDW surveys for the Canadian federal and provincial elections also include a question about the perceived closeness of the race at the district level. Further analyses were conducted using these additional pieces of information. These analyses show that individuals who were exposed to polls *and believed in their reliability* as well as those who did not perceive a close race were more accurate forecasters. The results are reported in section G of the appendix.

Data sources, descriptive statistics, and the questions used to construct the variables can be found in the appendix (sections A to C).

⁴Respondents who answered ‘no’ to the question whether they usually thought of themselves as close to any particular political party were not asked a follow-up question to determine if they nevertheless felt somewhat closer to one of the parties. Hence, leaners could not be distinguished from ‘pure’ independents.

⁵Respondents who answered “not very close” and “somewhat close” were grouped together (as ‘moderate’ partisans) to create more balanced categories.

4.4. Estimation strategies

For each of the (sub)national-level elections considered in this study, the relationships between the independent variables presented in the previous section (with the exception of the ENEP and the margin of victory) and citizens' individual forecasting skills (measured as a dichotomous indicator) are assessed through logistic regression analysis. For each election, the dependent variable is first regressed on (1) interest for the election, (2) election news attentiveness, (3) political knowledge, (4) party identification or coalition preference (as a scale ranging from 'strong loser' to 'strong winner'), (5) education, (6) age, (7) gender, (8) time of interview, and (9) the interaction of political knowledge and party identification (or coalition preference). Recall that vote expectation data were collected in three provinces for the 2015 Canadian federal election, two regions for the 2012 French legislative election, and two *Länder* or states for the 2013 German federal election. Hence, regional fixed effects are added to control for all unobserved regional factors in these elections.

At the district level, single-level regression analysis might not be well-suited to the structure of the data. Since voters are nested within groups (i.e., districts), contextual variations between these groups should be taken into account. Due to the hierarchical structure of the data, multilevel modelling seems to be the best approach to explain the accuracy of voter expectations at the district level (Gill and Womack 2013; see also Jones, Johnston and Pattie 1992; Steenbergen and Jones 2002). Section F in the appendix includes further methodological precisions on the multilevel modelling strategy employed here and potential sample size issues.

Since we are dealing with a continuous outcome variable—i.e., the cumulative Brier score index—at the district level, linear two-level random intercept regression models are performed to predict citizens' forecasting skills for each of the seven elections considered in this study. The level-1 variables are (1) interest for the election, (2) election news attentiveness, (3) political knowledge, (4) party identification (as a scale ranging from 'strong loser' to 'strong winner'), (5) education, (6) age, (7) gender, and (8) time of interview (with the addition of the *Political knowledge* × *Party identification* interaction). The level-2 predictors are the effective number of electoral parties and, alternatively, the margin of victory.

Table 1 shows the number of respondents in each election for district-level models, the number of districts (i.e., groups or clusters) as well as the average, minimum, and maximum number of observations per cluster.

5. Results

5.1. (Sub)national-level forecasts

Before presenting the results, Table 2, panel (a), shows the number of respondents for each of the (sub)national-level models as well as the percentage of correct forecasts among these respondents. As can be seen, the 2012 French legislative election is the only contest for which a majority of

respondents correctly predicted the outcome. The main reason for this is probably the fact that, since 2002, presidential elections are held a month before legislative ones—the goal being to maximize the chances of presidential majorities in the National Assembly (or, said another way, to reduce the risks of cohabitation) (Laurent, 2014, 120). By knowing the outcome of presidential elections before hand, French voters can more easily anticipate the results of legislative contests. Note also that the forecasting task was somewhat easier for French respondents as they were asked which political branch—the Left or the Right—would get more seats (as such, they did slightly better than would have a simple coin toss).

Turning to the results of the predictive models of the (sub)national outcomes, Figure 1 shows average marginal effects (AMEs) for every predictor included in the models by election (with the exception of age, gender, and time controls). For continuous variables (i.e., interest for election, news attentiveness, and political knowledge), the panels show the change in the probability of a correct forecast caused by a one standard deviation (SD) increase. These variables were standardized to better assess their importance relative to each other. For categorical variables (i.e., party identification/coalition preference and education), the panels show pairwise comparisons between different categories (i.e., the difference in the predicted probability of a correct forecast between two categories). For the party identification and coalition scale variables (which are both composed of five categories), a total of 10 pairwise comparisons are possible. Due to space limitations, I chose to show three of them: the average change in the probability of a correct forecast between (1) strong losers and strong winners, (2) strong losers and individuals with no party identification (or coalition preference), and (3) strong losers and moderate losers. For German elections, two results are displayed, that is (1) the AMEs computed from models using the party identification scale variable (in black) and those from models using the coalition preference scale variable (in grey). Complete regression results are available in section D of the appendix.

The results are not consistent across elections, but three predictors appear to matter *in almost every case considered here*, that is news attentiveness, political knowledge, and party identification (or coalition preference). As shown in panel (a) of Figure 1, the average differences in the probability of making a correct forecast at the (sub)national level between individuals who strongly identify with one of the losing parties and those who strongly identify with the winning party (or parties) are significant and in the expected direction in all cases with the notable exception of the 2013 German federal election. I get similar results for all three German elections if coalition preference is used instead of party identification.⁶ Those who identify with the winner

⁶Note that the higher validity of the coalition preference measure in comparison to the party identification scale in the case of Germany is particularly apparent for the 2013 German federal election where the association between party identification and forecasting skills is actually negative.

Did you see it coming?

Table 1

Descriptive data: explaining individual forecasting skills at the district level.

Election	<i>N</i> respondents	<i>N</i> districts	Average	Minimum	Maximum
Ontario 2011	716	105	6.8	1	22
Quebec 2012	564	118	4.8	1	13
Canada 2015	3,151	241	13.1	1	47
France 2012	791	105	7.5	1	27
Bavaria 2013	3,269	89	36.7	4	88
Lower Saxony 2013	594	85	7.0	1	14
Germany 2013	3,318	74	44.8	7	132

Note. Districts won by a candidate from a party for which respondents were not asked to provide a winning probability were excluded from the analyses. This was the case of 10 districts in the 2012 French legislative election.

Table 2

Percentage of correct forecasts for (sub)national-level outcomes and average cumulative Brier score (CBS) index for district-level outcomes, by election.

Election	(a) (Sub)national level		(b) District level	
	<i>N</i> respondents	% correct forecasts	<i>N</i> respondents	Average CBS index
Ontario 2011	843	40.81	716	0.49
Quebec 2012	657	47.18	564	0.39
Canada 2015	3,663	36.53	3,151	0.36
France 2012	1,367	58.81	791	0.32
Bavaria 2013	3,431	28.94	3,269	0.44
Lower Saxony 2013	641	31.98	594	0.34
Germany 2013	3,584	35.18	3,318	0.47

during the campaign or express a strong preference for the coalition that forms after the election are more likely to expect their favourite option to prevail and, incidentally, to correctly forecast the outcome. The change in probability when party identification goes from a strong sense of attachment to one of the losing parties to a strong sense of attachment to the winning party (or parties) is a minimum of 31 percentage points in the 2013 Bavarian state election and a maximum of 72 percentage points in the 2013 Lower Saxony state election (if we look at coalition preference instead for

The negative influence of party identification in the 2013 German federal election is not surprising if we consider how it was operationalized: recall that both CDU/CSU and SPD partisans were attributed the highest values on the scale (since they identified with one of the coalition partners that ended up forming the government after the election). However, a grand coalition of the CDU/CSU and the SPD is probably not the ideal scenario for many CDU/CSU and SPD partisans. In the MEDW surveys, German respondents were also asked how likely were a CDU/CSU–FDP coalition and a SPD–Green coalition to form after the election. A CDU/CSU–FDP coalition is perhaps more pleasing to CDU/CSU partisans, while a ‘red–green’ alliance might appear preferable to SPD partisans. This was indeed the case. Before revealing their expectations for each coalition agreement, respondents were asked to rate each of the potential government coalitions on a scale ranging from 0 to 10, where 0 meant they really disliked the coalition and 10 meant they really liked the coalition. The highest mean rating among CDU/CSU partisans was attributed to the CDU/CSU–FDP coalition (7.65 vs 6.03 for the grand coalition), while the highest mean rating among SPD partisans was attributed to the SPD–Green coalition (7.97 vs 5.87 for the grand coalition). As suspected, CDU/CSU partisans were more likely to forecast a CDU/CSU–FDP coalition (46.53 per cent) than a CDU/CSU–SPD coalition (32.64 per cent). However, SPD partisans were more likely to predict a grand coalition (39.45 per cent) or a CDU/CSU–FDP coalition (16.70 per cent) than a SPD–Green coalition (14.86 per cent).

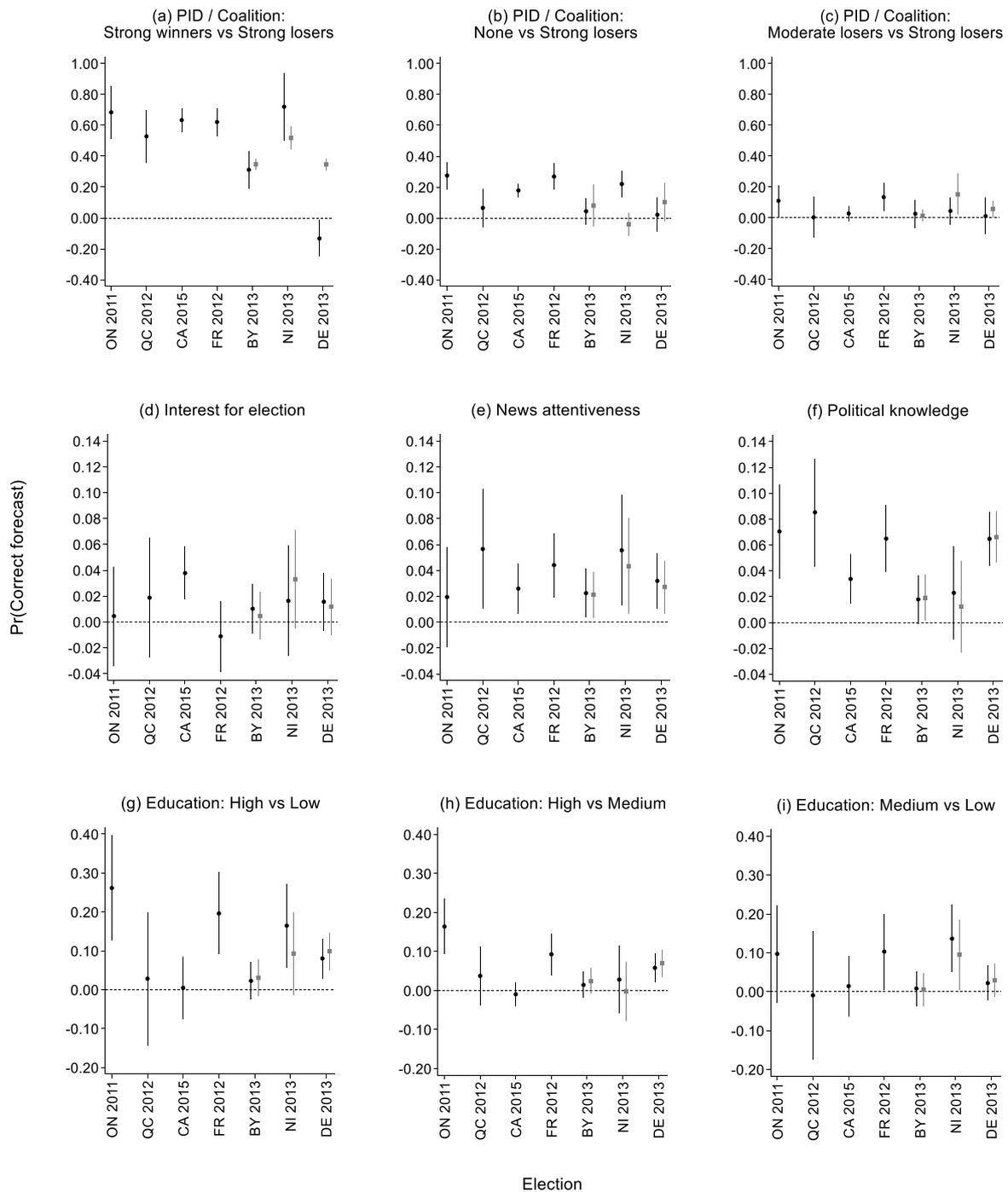
this election, the difference is around 52 percentage points). The difference, however, between strong losers and individuals with no party identification (or coalition preference) as well as strong and moderate losers—panels (b) and (c)—is not always significant.

As can be seen in panel (e), the average marginal effect for news attentiveness is statistically significant and in the expected direction (i.e., positive) for every election except the 2011 Ontario provincial election. Hence, those who pay close attention to election news (whether it is on television, in the newspapers, on the radio, or on the internet) appear more likely to make a correct forecast at the (sub)national level. A one-SD increase in news attentiveness is associated with a change in the probability of making a correct forecast of between two and six percentage points depending on the election. We can also express the change in the probability of correctly anticipating the outcome in terms of moving from the minimum to the maximum value of the news attentiveness scale. On average, a change from minimum to maximum news attentiveness leads to an increase in the probability of a correct forecast of about nine percentage points by a minimum in the 2015 Canadian federal election and of about 21 percentage points by a maximum in the 2012 Quebec provincial election. In most cases, being an election news ‘junkie’ only makes a small difference.

More knowledgeable citizens also seem to have an easier time anticipating election outcomes. The AME for knowledge is significant in five of the seven elections. Panel (f) shows the change in the probability of a correct forecast asso-

Did you see it coming?

Figure 1: Average marginal effects with 95% confidence intervals for (sub)national-level outcomes.



Note. ON = Ontario, QC = Quebec, CA = Canada, FR = France, BY = Bavaria, NI = Lower Saxony, DE = Germany. AMEs from models estimated with the party identification scale variable in black. AMEs from models estimated with the coalition preference scale variable (for German elections) in grey.

ciated with a one-SD increase in political knowledge (which is below 10 percentage points in all cases). Standardized results indicate that knowledge is a more influential factor than news attentiveness in most elections. We can also consider the change that is expected when moving from minimum to

maximum knowledge. On average, a full scale swing is associated with an increase in the probability of a correct forecast of about 30 percentage points or more in four out of the seven elections, that is the 2011 Ontario provincial election, the 2012 Quebec provincial election, the 2012 French leg-

islative election, and the 2013 German federal election. The expected increase in the probability of a correct forecast is smaller for the 2015 Canadian federal election (around 13 percentage points).

Although I focused on news attentiveness, political knowledge, and party identification (or coalition preference), as these variables seem to matter across most cases, it is interesting to note that education acted as a facilitator in three of the seven elections (perhaps four, depending on the model for the 2013 Lower Saxony state election), at least if we look at the difference between highly educated individuals and those with low levels of education. For example, the average difference in the probability of a correct forecast between individuals with high education and those with low education is as much as 26 percentage points in the 2011 Ontario provincial election. Note that interest for the election—panel (d)—turned out to be insignificant in all cases except the 2015 Canadian federal election.

To summarize, partisan biases appear to be the main factor influencing voters' expectations about election outcomes at the national or regional level. Those who identify with or prefer a losing party or coalition are more at risk of making an incorrect forecast, while those who are on the winning side have a higher probability of correctly predicting the outcome (since it matches with their own party identification or political preferences). Stating that winners are simply better forecasters would make little sense however. What the results show is the importance of wishful thinking—people being unable or unwilling to separate hopes from expectations. As mentioned by Epley and Gilovich (2016, 133—italics in original), “[p]eople generally *reason* their way to conclusions they favor, with their preferences influencing the way evidence is gathered, arguments are processed, and memories of past experience are recalled.” Thus, an important question is whether the distortions generated by partisan predispositions can be attenuated by certain characteristics. As we have seen, the politically sophisticated are potentially less inclined to let their own desires or wishes cloud their judgement.⁷ Coefficients for product terms in logistic regression analysis tell us nothing about the direction, magnitude, or significance of interactions (Ai and Norton, 2003; Mize, 2019). Only tests of second differences and group differences can assist us in reaching meaningful conclusions. I found no clear evidence for a moderating effect of knowledge on preferences. Visual representations of the *Political knowledge × Party identification (Coalition preference)* interaction alongside supplementary notes are provided in the appendix (section D). Perhaps, it is misguided to think that more politically aware individuals will be less tempted to evaluate the political world through partisan lenses. According to Lavine, Johnston and Steenbergen (2012, xiv), “sophistication (qua objective knowledge of politics) turns out to be a double-edged sword. While it facilitates political understanding, it also makes it easier for citizens to defend

their political attitudes through motivated bias.” In fact, political awareness might encourage individuals to resist information inconsistent with their political predispositions (Zaller, 1992).

The hypotheses presented in section 3 receive varying levels of support. Hypothesis 1 receives some support. News attentiveness and political knowledge (but not interest in the campaign) are statistically significant in most elections and differences in the probability of a correct forecast between the least knowledgeable and the most knowledgeable can be substantial. The findings offer perhaps less ambiguous support for hypothesis 2 as there are clear differences between winners and losers in all cases. Wishful thinking (measured through party identification or preferred coalition agreement) appears to be the strongest mechanism at work behind the formation of expectations at the (sub)national level. Finally, hypothesis 3, which is related to the influence of education, receives only weak support, while hypothesis 4, which is related to the potential moderating effect of knowledge on preferences, receives no clear support.

5.2. District-level forecasts

I now turn to citizens' predictions of district-level outcomes to verify whether the same patterns observed at the (sub)national level can be found in district races as well. District-level forecasts across all seven elections were measured through probabilistic estimates. As already explained, the accuracy of these forecasts is assessed using the cumulative Brier score index (which ranges from -1 to 1). Since voters are nested within geographical units, I estimated multilevel models. Table 2, panel (b), shows the average value of the CBS index among respondents in each election. It ranges from a low of 0.32 in the 2012 French legislative election to a high of 0.49 in the 2011 Ontario provincial election.

The multilevel models for district-level forecasts include the same set of independent variables as the logistic models previously used to explain the accuracy of (sub)national-level expectations. These models also take into consideration the degree of competitiveness in the various district-level races through two indicators, that is the effective number of electoral parties (ENEP) and the margin of victory. Since the ENEP and the margin of victory are closely related measures (as the ENEP is computed using the vote share won by each candidate), these two indicators are included in the models separately rather than concomitantly.⁸ A large margin of victory should facilitate the forecasting task of citizens (since it indicates a non-competitive race), while a large ENEP should complicate it.

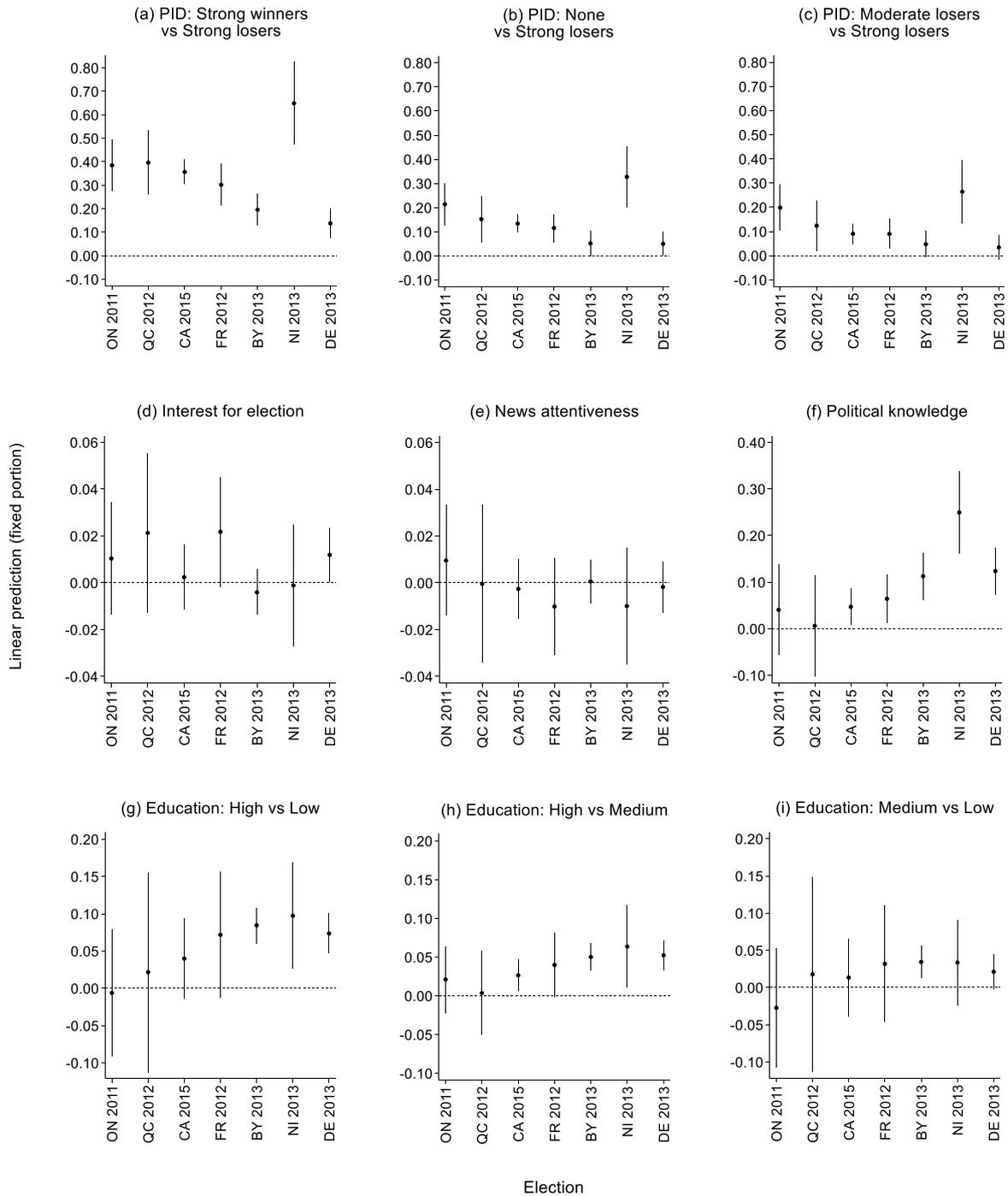
Once again, complete regression results for the multilevel analyses conducted here are reported in the appendix (section E). Figure 2 shows the change produced by a one-SD increase on the cumulative Brier score index for level-1 continuous predictors and the average difference between specific categories for factor variables (results for age, gen-

⁷I do not look at the potential interaction of education and preferences: there were simply not enough cases in each possible pairs of categories to estimate the interaction coefficients.

⁸For the 2012 French legislative election, the margin of victory and the ENEP in the first round were used.

Did you see it coming?

Figure 2: Linear prediction (fixed portion) with 95% confidence intervals for district-level outcomes.



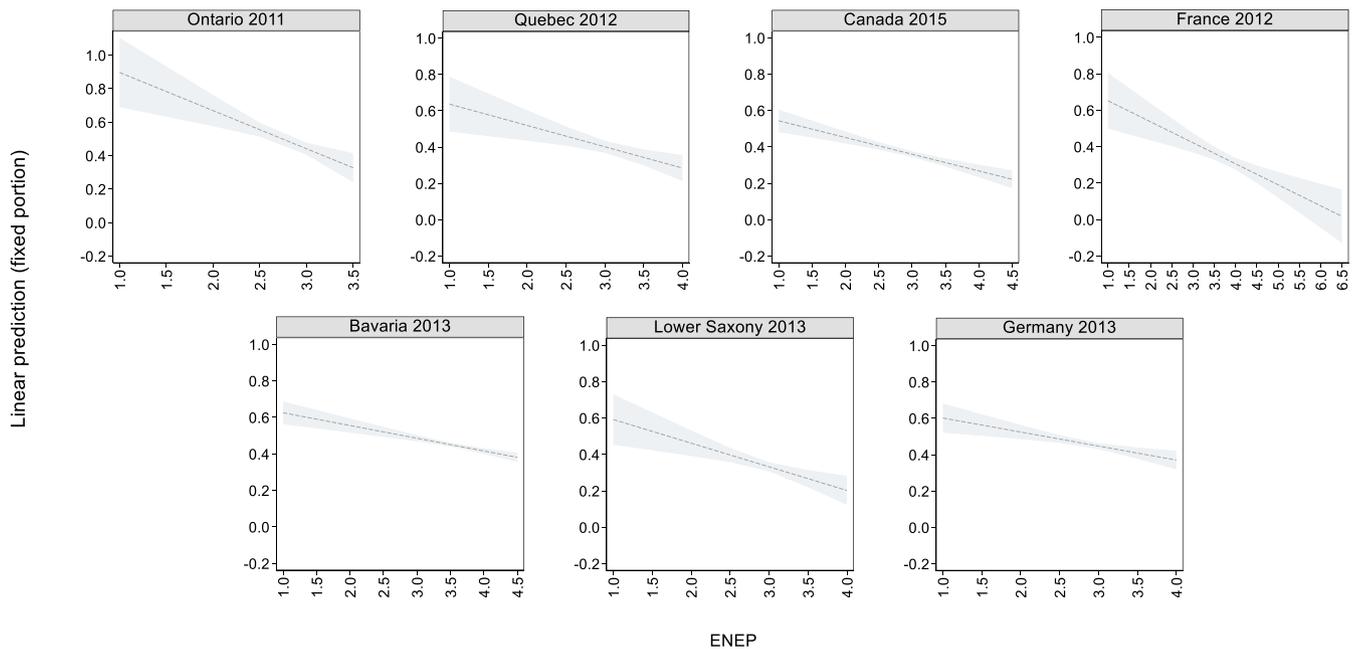
Note. ON = Ontario, QC = Quebec, CA = Canada, FR = France, BY = Bavaria, NI = Lower Saxony, DE = Germany.

der, and time controls are not shown).⁹ Compared to voters with a strong sense of identification to one of the district losers, we would expect voters with a strong sense of attachment to the district winner to have a CBS index score

⁹The coefficients that are shown are those of models estimated with the ENEP as the level-2 measure of competitiveness.

that is, on average, higher by somewhere between 0.30 and 0.40 points in four of the seven elections (i.e., Ontario 2011, Quebec 2012, Canada 2015, and France 2012). In the 2013 Lower Saxony state election, it is higher, on average, by 0.65 points. Recall that the CBS index scale ranges from -1 to 1. The substantive importance of a 0.30 or 0.40 point difference

Figure 3: Linear prediction for effective number of electoral parties.



can be debated, but party identification appears once more to outweigh the influence of other variables. The difference between strong losers and strong winners is, however, less pronounced in the 2013 Bavarian state election and the 2013 German federal election—less than 0.20 points. Note that panels (a) to (c) are showing the differences between chosen categories of the party identification scale variable when political knowledge is at zero—i.e., its mean (since knowledge was standardized). The coefficient of interest for the election is statistically significant in only one election (i.e., the 2013 German federal election) and barely so. Election news attentiveness has apparently no influence on forecasting skills at the district level. This is not entirely surprising since, as I mentioned earlier, media coverage tends to focus on the horse-race at the national or regional level. Political knowledge is positively associated with forecasting skills in five of the seven elections. With the exception of the 2015 Canadian federal election however, once the *Political knowledge* \times *Party identification* interaction is considered, the influence of knowledge on forecasting skill is considerably reduced among certain groups of voters. This is particularly true for the 2013 Lower Saxony state election: for example, political knowledge has almost no impact among moderate winners and even has a slightly negative influence among strong winners. The interaction is discussed further in section E of the appendix. Generally speaking, the benefits of high knowledge seem to be concentrated among (moderate and strong) losers. This is as one would expect: non-partisans and, above all, those identifying with the winning party have less to gain from growing levels of knowledge. Among strong losers, moving from no knowledge to max-

imum knowledge leads, on average, to an increase of 0.18 points in the 2015 Canadian federal election, 0.32 points in the 2012 French legislative election, 0.49 points in the 2013 Bavarian state election, 1.19 points in the 2013 Lower Saxony state election, and 0.54 points in the 2013 German federal election. When it comes to the moderating effect of knowledge on party identification, however, the bulk of the evidence seems to confirm the findings from (sub)national-level analyses: higher levels of political knowledge do little to reduce the influence of wishful preferences on voters' forecasts. Once again, visualizations of the interaction and additional notes are provided in the appendix (section E). Interestingly, education only seems to play a role in the German federal and state elections: highly educated voters have, on average, higher scores than individuals with low and medium levels of education. This difference, however, is rather small—less than 0.10 points.

What about level-2 variables? Competitiveness (measured as the ENEP or the margin of victory) is statistically significant across all elections: lower ENEPs and wide margins apparently facilitate the forecasting task of voters. Coefficients for margin of victory, however, lack substantive importance. A one-point increase in the margin of victory produces, for an average voter, an increase in the CBS index score that lies somewhere between 0.003 and 0.007 points in all elections. For example, this means that a 30 percentage point gap between the leading candidates in a district (which can certainly be considered as an overwhelming victory) will be associated with an increase in CBS values that is between 0.09 and 0.21 points. Each additional (effective) party has a relatively small impact, except in the 2011 On-

tario provincial election (-0.23 points). To put things in perspective, moving from a situation where there is absolutely no competition (ENEP = 1) to a situation where three parties gather most of the votes (ENEP = 3) is expected to reduce the CBS index score (of an average voter) by about 0.46 points in the 2011 Ontario provincial election, 0.24 points in the 2012 Quebec provincial election and the 2012 French legislative election, 0.26 points in the 2013 Lower Saxony state election, and less than 0.20 points in the two remaining elections. In other words, competitiveness plays a role in making elections harder (easier) to forecast but a somewhat limited one in most cases. Figure 3 shows the expected change in CBS score for different values of ENEP (all else being equal).

To sum up, I find strong support for hypothesis 2: party identification is the main driver of voters' expectations. Hypothesis 1 receives some support since political knowledge appears to exert a positive influence across most elections. Interest for the election is (barely) significant in only one election while news attentiveness does not reach statistical significance in any of the elections under study. Those who follow the news attentively are perhaps more likely to get valuable information about the national (or regional) race but not about the race taking place in their own district. Hypothesis 3 receives limited support: education was associated to forecasting abilities at the district level, but only in the three German elections. The evidence regarding an interaction effect between knowledge and party identification (hypothesis 4) is mostly inconclusive. Finally, the results do support hypothesis 5, but competitiveness needs to be *very* low to witness what can only be described as a moderate increase in forecasting ability.

6. Conclusion

How voters form their expectations about the political environment they inhabit is an important question. Expectations about election outcomes can profoundly affect citizens' behaviours (Murr, 2013), notably their willingness to participate in the political process, the way they vote, and their satisfaction with democracy (unexpected losses might, for example, create resentment towards political processes). As mentioned by Leiter, Reilly and Stegmaier (2020), "when faced with a reality that does not comport to their established beliefs, citizens may react quite negatively—an increasingly concerning phenomenon in modern democracies." Hence, it is important to identify the traits, attitudes, and habits that set apart the citizens who are most likely to form accurate expectations about political developments from those who are less inclined to correctly anticipate political outcomes.

In this paper, I have identified the predictors of forecasting abilities both at the (sub)national and district levels in a diverse set of multi-party electoral contexts. I have also proposed a new measure of forecasting ability—the CBS index—that is a much more precise indicator of predictive competence than the usual 'correct–incorrect' binary measure which may hide considerable variation between indi-

viduals. Two questions were raised at the start of this work, that is (1) once partisan predispositions have been accounted for, what remains to explain one's ability at predicting election outcomes?; and (2) does one's level of sophistication moderate the link between political preferences and forecasting abilities? Partisan predispositions seem to be the main driver of electoral expectations among voters. Those who strongly identify with (or express a strong preference for) the eventual winner(s) *appear* to possess better forecasting skills than voters on the losing side. However, this result should not be interpreted as a manifestation of superior abilities, but rather as a demonstration of the impact of biased judgement. To quote Campbell et al. (1960, 133; see also Zaller 1992, 241), "[i]dentification with a party raises a perceptual screen through which the individual tends to see what is favorable to his partisan orientation." Hence, individuals have a tendency to disregard or downplay information or cues pointing towards the defeat of their preferred party or political arrangement and to overemphasize what they see as information favouring the scenario they wish to see happen. Political knowledge mattered across most elections both at the (sub)national and district levels. In national and regional elections, news attentiveness was also associated with better forecasting, but moderately so. Dolan and Holbrook (2001) were thus right to point out that the formation of expectations is influenced both by affect and cognition. However, it would be a mistake to overemphasize the role of factual knowledge: wishful thinking—voters' tendency to have higher expectations for their preferred outcome—remains the most important factor associated with forecasting accuracy and only very high levels of knowledge and information (which characterise a minority of citizens) seem to make a true difference in voters' ability to anticipate electoral outcomes. There is also little evidence that knowledge moderates the influence of wishful thinking on forecasting abilities. This is an important finding that supports Rose and Aspiras's (2020, 412) claim that "there is limited evidence that knowledge in a domain [...] and feedback about one's past forecasts [...] are sufficient to reduce [wishful thinking] effects."

Nonetheless, it is important to consider that information could play a key role through a route other than that of factual knowledge or media exposure: a small body of research suggests that the characteristics of one's social (or 'contact') network—such as its size, diversity, and the frequency of political discussion—have a considerable impact on citizens' expectations about electoral outcomes (Leiter et al., 2018; Leiter, Reilly and Stegmaier, 2020). Unfortunately, the datasets used in this study (as most datasets including vote expectation items) prevent any serious appraisal of the effect of social interactions. Future research should pay more attention to the influence of network configurations and social interactions on citizens' expectations about elections and politics.

References

- Ai, Chunrong and Edward C. Norton. 2003. "Interaction Terms in Logit and Probit Models." *Economics Letters* 80(1):123–129.
- Anderson, Cameron D., R. Michael McGregor and Scott Pruyers. 2020. "Incumbency and Competitiveness in City Council Elections: How Accurate Are Voter Perceptions?" *Canadian Journal of Political Science / Revue canadienne de science politique* 53(4):853–871.
- Babad, Elisha. 1995. "Can Accurate Knowledge Reduce Wishful Thinking in Voters' Predictions of Election Outcomes?" *Journal of Psychology* 129(3):285–300.
- Baron, Jonathan. 2014. Heuristics and Biases. In *The Oxford Handbook of Behavioral Economics and the Law*, ed. Eyal Zamir and Doron Teichman. New York: Oxford University Press, pp. 3–27.
- Blais, André. 2010. "Making Electoral Democracy Work." *Electoral Studies* 29(1):169–170.
- Blais, André and Marc-André Bodet. 2006. "How Do Voters Form Expectations About the Parties' Chances of Winning the Election?" *Social Science Quarterly* 87(3):477–493.
- Campbell, Angus, Philip E. Converse, Warren E. Miller and Donald E. Stokes. 1960. *The American Voter*. New York: John Wiley and Sons.
- Carty, R. Kenneth and Munroe Eagles. 2000. "Is There a Local Dimension to Modern Election Campaigns? Party Activists' Perceptions of the Media and Electoral Coverage of Canadian Constituency Politics." *Political Communication* 17(3):279–294.
- Cox, Gary W. 1997. *Making Votes Count: Strategic Coordination in the World's Electoral Systems*. Cambridge: Cambridge University Press.
- Daoust, Jean-François, Claire Durand and André Blais. 2020. "Are Pre-Election Polls More Helpful than Harmful? Evidence from the Canadian Case." *Canadian Public Policy / Analyse de politiques* 46(1):175–186.
- Delavande, Adeline and Charles F. Manski. 2012. "Candidate Preferences and Expectations of Election Outcomes." *Proceedings of the National Academy of Sciences* 109(10):3711–3715.
- Dolan, Kathleen A. and Thomas M. Holbrook. 2001. "Knowing Versus Caring: The Role of Affect and Cognition in Political Perceptions." *Political Psychology* 22(1):27–44.
- Epley, Nicholas and Thomas Gilovich. 2016. "The Mechanics of Motivated Reasoning." *Journal of Economic Perspectives* 30(3):133–140.
- Ganser, Christian and Patrick Riordan. 2015. "Vote Expectations at the Next Level: Trying to Predict Vote Shares in the 2013 German Federal Election by Polling Expectations." *Electoral Studies* 40(Dec.):115–126.
- Gill, Jeff and Andrew J. Womack. 2013. The Multilevel Model Framework. In *The SAGE Handbook of Multilevel Modeling*, ed. Marc A. Scott, Jeffrey S. Simonoff and Brian D. Marx. Thousand Oaks: SAGE, pp. 3–20.
- Gimpel, James G. and Diane Hollern Harvey. 1997. "Forecasts and Preferences in the 1992 General Election." *Political Behavior* 19(2):157–175.
- Graefe, Andreas. 2014. "Accuracy of Vote Expectation Surveys in Forecasting Elections." *Public Opinion Quarterly* 78(S1):204–232.
- Granberg, Donald and Edward Brent. 1983. "When Prophecy Bends: The Preference-Expectation Link in U.S. Presidential Elections, 1952–1980." *Journal of Personality and Social Psychology* 45(3):477–491.
- Guinjoan, Marc, Pablo Simón, Sandra Bermúdez and Ignacio Lago. 2014. "Expectations in Mass Elections: Back to the Future?" *Social Science Quarterly* 95(5):1346–1359.
- Hayes, Samuel P., Jr. 1936. "The Predictive Ability of Voters." *Journal of Social Psychology* 7(2):183–191.
- Jackson, Natalie. 2018. The Rise of Poll Aggregation and Election Forecasting. In *The Oxford Handbook of American Elections and Political Behavior*, ed. Lonna Rae Atkeson and R. Michael Alvarez. Oxford: Oxford University Press, pp. 609–632.
- Johnston, Ron, Todd Hartman and Charles Pattie. 2019. "Predicting General Election Outcomes: Campaigns and Changing Voter Knowledge at the 2017 General Election in England." *Quality and Quantity* 53:1369–1389.
- Jones, K., R. J. Johnston and C. J. Pattie. 1992. "People, Places and Regions: Exploring the Use of Multi-Level Modelling in the Analysis of Electoral Data." *British Journal of Political Science* 22(3):343–380.
- Krizan, Zlatan, Jeffrey C. Miller and Omesh Johar. 2010. "Wishful Thinking in the 2008 U.S. Presidential Election." *Psychological Science* 21(1):140–146.
- Kunda, Ziva. 1990. "The Case for Motivated Reasoning." *Psychological Bulletin* 108(3):480–498.
- Laakso, Markku and Rein Taagepera. 1979. "'Effective' Number of Parties: A Measure with Application to West Europe." *Comparative Political Studies* 12(1):3–27.
- Laurent, Annie. 2014. Des effets de l'inversion du calendrier électoral sur la fragmentation du système partisan français (1967–2012). In *Institutions, élections, opinion: Mélanges en l'honneur de Jean-Luc Parodi*, ed. Yves Déloye, Alexandre Dézé and Sophie Maurer. Paris: Presses de Sciences Po, pp. 119–138.
- Lavine, Howard G., Christopher D. Johnston and Marco R. Steenbergen. 2012. *The Ambivalent Partisan: How Critical Loyalty Promotes Democracy*. Oxford: Oxford University Press.
- Leiter, Debra, Andreas Murr, Ericka Rascón Ramírez and Mary Stegmaier. 2018. "Social Networks and Citizen Election Forecasting: The More Friends the Better." *International Journal of Forecasting* 34(2):235–248.
- Leiter, Debra, Jack L. Reilly and Mary Stegmaier. 2020. "Echoing Certainty in Uncertain Times: Network Partisan Agreement and the Quality of Citizen Forecasts in the 2015 Canadian Election." *Electoral Studies* 63:1–6.
- Lewis-Beck, Michael S. and Andrew Skalaban. 1989. "Citizen Forecasting: Can Voters See into the Future?" *British Journal of Political Science* 19(1):419–427.
- Lewis-Beck, Michael S. and Charles Tien. 1999. "Voters as Forecasters: A Micromodel of Election Prediction." *International Journal of Forecasting* 15(2):175–184.
- Lewis-Beck, Michael S. and Mary Stegmaier. 2011. "Citizen Forecasting: Can UK Voters See the Future?" *Electoral Studies* 30(2):264–268.
- Madson, Gabriel J. and D. Sunshine Hillygus. 2020. "All the Best Polls Agree with Me: Bias in Evaluations of Political Polling." *Political Behavior*. 42:1055–1072.
- Meffert, Michael F., Sascha Huber, Thomas Gschwend and Franz Urban Pappi. 2011. "More than Wishful Thinking: Causes and Consequences of Voters' Electoral Expectations About Parties and Coalitions." *Electoral Studies* 30(4):804–815.
- Mellers, Barbara, Eric Stone, Pavel Atanasov, Nick Rohrbaugh, S. Emlen Metz, Lyle Ungar, Michael M. Bishop, Michael Horowitz, Ed Merkle and Philip Tetlock. 2015b. "The Psychology of Intelligence Analysis: Drivers of Prediction Accuracy in World Politics." *Journal of Experimental Psychology: Applied* 21(1):1–14.
- Mellers, Barbara, Eric Stone, Terry Murray, Angela Minster, Nick Rohrbaugh, Michael Bishop, Eva Chen, Joshua Baker, Yuan Hou, Michael Horowitz, Lyle Ungar and Philip Tetlock. 2015a. "Identifying and Cultivating Superforecasters as a Method of Improving Probabilistic Predictions." *Perspectives on Psychological Science* 10(3):267–281.
- Miller, Michael K., Guanchun Wang, Sanjeev R. Kulkarni, H. Vincent Poor and Daniel N. Osherson. 2012. "Citizen Forecasts of the 2008 U.S. Presidential Election." *Politics and Policy* 40(6):1019–1052.
- Mize, Trenton D. 2019. "Best Practices for Estimating, Interpreting, and Presenting Nonlinear Interaction Effects." *Sociological Science* 6:81–117.
- Murr, Andreas. 2017. Wisdom of Crowds. In *The SAGE Handbook of Electoral Behaviour*, ed. Kai Arzheimer, Jocelyn Evans and Michael S. Lewis-Beck. Thousand Oaks: SAGE, pp. 835–860.
- Murr, Andreas E. 2015. "The Wisdom of Crowds: Applying Condorcet's Jury Theorem to Forecasting US Presidential Elections." *International Journal of Forecasting* 31(3):916–929.
- Murr, Andreas E. 2016. "The Wisdom of Crowds: What Do Citizens Forecast for the 2015 British General Election?" *Electoral Studies* 41(Mar.):283–288.
- Murr, Andreas E., Mary Stegmaier and Michael S. Lewis-Beck. 2021. "Vote Expectations Versus Vote Intentions: Rival Forecasting Strategies." *British Journal of Political Science* 51(1):60–67.
- Murr, Andreas Erwin. 2011. "'Wisdom of Crowds'? A Decentralised Election Forecasting Model that Uses Citizens' Local Expectations." *Electoral Studies* 30(4):771–783.

Did you see it coming?

- Murr, Andreas Erwin. 2013. "Citizen Forecasting in the 2010 British General Election." PhD thesis, Department of Government, University of Essex.
- Nadeau, Richard, Richard G. Niemi and Timothy Amato. 1994. "Expectations and Preferences in British General Elections." *American Political Science Review* 88(2):371–383.
- Rose, Jason P. and Olivia Aspiras. 2020. "'To Hope Was to Expect': The Impact of Perspective Taking and Forecast Type on Wishful Thinking." *Journal of Behavioral Decision Making* 33(4):411–426.
- Searles, Kathleen, Glen Smith and Mingxiao Sui. 2018. "Partisan Media, Electoral Predictions, and Wishful Thinking." *Public Opinion Quarterly* 82(S1):888–910.
- Sjöberg, Lennart. 2009. "Are All Crowds Equally Wise? A Comparison of Political Election Forecasts by Experts and the Public." *Journal of Forecasting* 28(1):1–18.
- Steenbergen, Marco R. and Bradford S. Jones. 2002. "Modeling Multilevel Data Structures." *American Journal of Political Science* 46(1):218–237.
- Stephenson, Laura B., John H. Aldrich and André Blais, eds. 2018. *The Many Faces of Strategic Voting: Tactical Behavior in Electoral Systems Around the World*. Ann Arbor: University of Michigan Press.
- Stiers, Dieter and Ruth Dassonneville. 2018. "Affect Versus Cognition: Wishful Thinking on Election Day: An Analysis Using Exit Poll Data from Belgium." *International Journal of Forecasting* 34(2):199–215.
- Surowiecki, James. 2004. *The Wisdom of Crowds*. London: Abacus.
- Umit, Resul. 2019. "Unfulfilled Winning Expectations Decrease Voter Satisfaction with Democracy." Working paper.
- Wilks, Daniel S. 2011. *Statistical Methods in the Atmospheric Sciences*. Oxford: Academic Press.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.