

## **Polls, coalition signals and strategic voting: An experimental investigation of perceptions and effects**

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**Abstract.** Polls and coalition signals can help strategic voters in multiparty systems with proportional representation and coalition governments to optimise their vote decision. Using a laboratory experiment embedded in two real election campaigns, this study focuses on voters' attention to and perception of polls and coalition signals. The manipulation of polls and coalition signals allows a causal test of their influence on strategic voting in a realistic environment. The findings suggest that active information acquisition to form fairly accurate perceptions of election outcomes can compensate for the advantage of high political sophistication. The theory of strategic voting is supported by the evidence, but only for a small number of voters. Most insincere vote decisions are explained by other factors. Thus, the common practice to consider all insincere voters as strategic is misleading.

**Keywords:** strategic voting; polls; coalitions; expectations; experiment

### **Introduction**

Voters face a dilemma if their preferred party has no chance of winning in the upcoming election. If instrumental considerations motivate the vote, the expressive satisfaction of casting a ballot for the most preferred party is insufficient to compensate for the feeling of 'wasting' a vote that fails to influence government formation and, ultimately, desirable policy outcomes. For those who feel a citizen's duty is to vote and who care about the outcome of the next election, just staying at home is not an option. Such voters might rather decide to defect and cast a ballot for a less-preferred party, but one that will play a more decisive role in the formation of the next government. Such behaviour is called 'strategic voting' (Cox 1997; Fisher 2004). Paraphrasing a former United States Secretary of Defense, strategic voters work with the parties they have, not the parties they want. Voters in multiparty systems with proportional representation and coalition governments often will not only find themselves in such a situation, but also have options to do something about it.

Strategic voting usually requires that election outcomes be close and uncertain. Voters can then at least believe that their vote (and that of like-minded voters) will be decisive (Acevedo & Krueger 2004; Darmofal 2010). It also requires that voters form fairly accurate expectations about the electoral chances of parties and coalitions in the upcoming election. This implies that strategic voters not only are politically sophisticated, but also have access to fairly accurate and current information such as polls. The existing evidence for strategic voting, however, is based mostly on district-level and survey-based studies that offer corroborating but circumstantial evidence. Even the key dependent variable – strategic voting – is ambiguous. Observed defections from the most preferred party are *assumed* to be due to deliberate strategic considerations and not due to other, non-instrumental factors. Many of these votes may in fact be merely ‘insincere’ (following the definition that only a vote for the most-preferred party is sincere). Without carefully distinguishing strategic from insincere voters, the results of previous research might be misleading.

Conclusive micro-level causal tests of the conditions and processes that lead to strategic voting decisions are mostly missing. Notable exceptions are laboratory experiments in the economic tradition that do offer direct, individual-level support for strategic voting (e.g., Forsythe et al. 1993, 1996; McCuen & Morton 2010; Meffert & Gschwend 2007). At the same time, these experiments use highly abstract, context-free settings and monetary incentives that make a generalisation of the findings very difficult.

The purpose of this study is to test whether voters in multiparty systems conform to the expectations of the theory of strategic voting. The method is an information-selection and voting experiment conducted during two real German state election campaigns. Two crucial pre-electoral cues – nonpartisan polls and partisan coalition signals – were unobtrusively manipulated and participants’ decision-making behaviour closely traced and measured. First, we develop our specific expectations by reviewing research on strategic voting in general and on polls and coalition signals in particular.

## **Strategic voting**

Strategic voting, or more precisely, behaviour that looks like strategic voting, has been documented for a variety of election systems, from parliamentary democracies to presidential systems, and under different electoral rules. Evidence has been found for countries such as Austria (Meffert & Gschwend 2010), Germany (Bawn 1999; Gschwend 2007a; Pappi & Thurner 2002; Shikano et al. 2009), Great Britain (Alvarez & Nagler 2000; Franklin

et al.1994; Lanoue & Bowler 1992; Niemi et al. 1992, 1993), Israel (Bargsted & Kedar 2009), The Netherlands (Irwin & Van Holsteyn 2002, 2003), Canada (Blais et al. 2001, 2006; Lanoue & Bowler 1998), New Zealand (Karp et al. 2002), Spain (Lago 2008), Portugal (Gschwend 2007b) and the United States (Abramson et al. 1992, 1995). While evidence for strategic voting can be found for most elections, the number of voters who actually engage in strategic voting is fairly low and typically ranges between 5 and 15 per cent of the electorate. In fact, strategic voting only makes sense if the appropriate conditions are given – primarily a close race and plausible alternative choices (Alvarez et al. 2006).

Strategic voting behaviour has been very well documented for electoral systems with single member districts and plurality elections – most notably Great Britain – and to a lesser degree for electoral systems with multiparty systems using proportional representation (Cox 1997). The latter type of system usually leads to coalition governments but might offer as many, if not more, incentives for strategic voting than British-type systems, especially for supporters of small parties (Abramson et al. 2010). First, proportional representation is usually not free from important restrictions – most notably a minimum vote threshold that a party must pass to become eligible for seats in parliament. Falling short of such a threshold means that a vote for a party is ‘wasted’ or ‘lost’ because it does not count toward the distribution of seats in parliament. Small parties that are close to the threshold, or fail to pass the threshold, should raise strategic considerations of the electoral chances among supporters of small parties. Strategic voters might also be found among supporters of major parties. If the preferred major party has a preferred junior coalition partner that is in danger of falling short of the electoral threshold, they might employ a coalition insurance strategy. Casting a strategic list vote for the junior coalition partner might ensure that it can pass the threshold and make the preferred coalition possible (Gschwend 2004, 2007a).

Our expectation is deceptively simple. A close election and plausible alternative choices should increase the likelihood of strategic voting. The challenge is to find, or more precisely to create, circumstances under which voters face a close election for their preferred party along with available options to vote strategically. In most real elections, few voters find themselves in such a situation, and even if they do and defect from their most preferred party, it is virtually impossible to rule out alternative, non-strategic considerations for this decision. The solution we propose below involves an experimental manipulation of poll information to create theoretically relevant scenarios, but in the context of actual election campaigns.

## **Polls, electoral expectations and political sophistication**

Polls are a fact of life in political campaigns and widely reported in the media. The question as to whether polls have any consistent effect on voters, however, is far from settled (e.g., Mutz 1998). The theory of strategic voting assumes that voters form rational expectations about the outcome of an election or, more precisely, how well the parties will perform in the upcoming election (Cox 1997). Pre-election polls are the most important (even if not always correct) source of such information and widely disseminated in the media during political campaigns.

The availability of reliable polls, however, is not enough. Evidence from public opinion research suggests that political expectations are subject to prevalent projection effects. Expectations are often found to be strongly shaped and distorted by existing political preferences (Abramson et al. 1992; Babad 1995; Babad et al. 1992; Bartels 1985, 1987; Blais & Turgeon 2004; Dolan & Holbrook 2001; Gimpel & Harvey 1997; Granberg & Brent 1983; Johnston et al. 1992; Lewis-Beck & Skalaban 1989; Mutz 1998). For Germany, Schoen (1999, 2000) shows that the expectation of whether or not a small party will pass the 5 per cent minimum vote threshold is shaped by party identification. Voters tend to overestimate the chances of preferred small parties while underestimating the chances of disliked small parties. The literature cited above suggests that expectations are a product of both preference-driven projections and objective external sources of information such as polls. The opposite case, that expectations influence preferences, is possible as well, but given only a very low probability in the literature (Granberg & Brent 1983; Mutz 1998).

If we accept that polls are the best available source of nonpartisan, fairly objective information about the possible outcome of an upcoming election, the more pertinent questions become who pays attention to polls and who uses such information to make better predictions of electoral outcomes. The most obvious answer is political sophisticates. Voters with a high level of political knowledge should be most aware of the latest polls and thus have a better ability to make accurate election forecasts. Awareness of political information is, after all, a defining characteristic of political sophistication (Zaller 1992). Dolan and Holbrook (2001) show that knowledge improves the forecasting accuracy of voters. While mere 'membership in the polity' (Lewis-Beck & Skalaban 1989; see also Irwin & Van Holsteyn 2002) and experience with historical coalition formation patterns (Armstrong & Duch 2010) should be sufficient to make reasonable predictions, access to current polls is required for more accurate forecasts of particular elections.

Even low sophisticates are not necessarily lost. Access and attention to poll information in the media should make it possible for virtually every voter interested in meaningful forecasts to do so, and work against the projection effect at the same time. Unless an individual chooses to disregard or misperceive objective information, factual information should constrain the projection effect. It is reasonable to assume that strategic voters are motivated by a need for accuracy (Fiske & Taylor 1991) or behave as if they were 'intuitive scientists' (Baumeister & Newman 1994) who carefully search and process information to maximise accuracy. The evidence, however, is mixed. Babad (1995), for example, finds that access to relevant information does not prevent wishful thinking, while Babad et al. (1992) find that information reduces wishful thinking to zero.

In summary, politically sophisticated voters are expected to have both the motivation and ability to form accurate election forecasts. Partisan voters, on the other hand, might have the motivation to pay attention to poll information, but their political preferences should also induce wishful thinking and a distorted perception of factual information. Given this uncertain relationship, both the actual polls as well as their perceptions might affect voters' decisions and will have to be taken into account.

### **Coalition signals**

In parliamentary systems using proportional representation, individual parties mostly fail to obtain an absolute majority of seats to govern alone (Katz 1997). Typical governments are coalitions of two or more parties. Even if voters usually cast only a single vote for one party, they might very well be aware of possible coalitions after the election and might take these expectations into account (Blais et al. 2006; Gschwend 2004, 2007a; Meffert & Gschwend 2010). In fact, parties will often and explicitly send out signals to either rule out a coalition with another party or to announce a preference for a future coalition partner. Such cues or signals should help voters when deciding how to cast a vote. If two parties have (credibly) ruled out a specific coalition, it will not make sense for a strategic voter to cast a ballot in favour of this coalition.

In the case of Germany, the setting of our study, parties often use specific appeals or coalition signals to explicitly suggest strategic voting (Gschwend 2007a; Schoen 2000; Roberts 1988). These appeals will often be *negative* by ruling out a coalition with some other party, often in an attempt to project electoral strength by denying the need for a coalition partner. Negative appeals might be the default response but with limited credibility as a given electoral outcome will often force parties to form specific coalitions, no matter

the denials before an election. The more interesting appeals are *positive* and signal to voters a desirable coalition partner (while implicitly admitting that the party needs a partner to win). The typical example is an incumbent or newly proposed two-party coalition with a strong major party and a small junior partner. If the latter is weak and in danger of falling short of the electoral threshold, German parties often resort to explicit appeals for strategic voting in the form of a 'rental vote' (*Leihstimme*). Supporters of the safe major party are asked to cast, or 'rent out,' a vote for the small coalition partner to insure the minor party's entry into parliament and to make the desired coalition possible.

If coalition signals turn out to facilitate strategic voting, this would have interesting implications for the theory of strategic voting. These signals can be a convenient shortcut for strategic voters to form expectations about the electoral outcomes. However, if voters merely follow such a signal *without* adjusting their electoral expectations in a way that would justify the defection from the preferred party, a strategic vote would not be the result of a sophisticated and informed decision making process, but rather a passive reaction to explicit partisan appeals by the parties. By definition, such a vote would not be strategic, but merely insincere. In short, our final expectation is that coalition signals increase the likelihood of insincere or strategic voting, at all levels of political sophistication.

### **Experimental study design**

The goal of the study is to test the effects of polls and coalition signals on strategic voting. This raises a number of methodological issues. The vast majority of studies about strategic voting at the individual level are based on cross-sectional surveys, conducted before or after a single election. This makes a causal test more or less impossible. This is a particularly serious problem when the relationship of preferences and expectations is unclear and possibly reciprocal. Second, looking at a single election usually does not provide much variation in the polls or changing coalition signals. Both are fairly stable and consistent before elections, and every voter will receive more or less the same information. As a consequence, it is nearly impossible to establish a causal link from exposure to polls and other signals to political behaviour. Even if objective conditions favouring strategic voting exist, they might only affect a small part of the electorate (Alvarez et al. 2006). In short, it is very difficult to determine the effect of polls and coalition signals and the tendency to vote strategically with cross-sectional surveys.

As an alternative, laboratory experiments can overcome the problem of establishing causality by clearly separating cause and effect. They allow for a careful construction of apparently objective conditions such as a close election. However, laboratory studies come with the downside of limited external validity. Experiments usually use fictitious scenarios that might provide excellent tests of causal hypotheses, but fail to account for the complexity of real world elections.

Because the goal of this study is to test the *causal* effects of polls and coalition signals on strategic voting, we chose an experimental approach. However, instead of creating a fictitious election campaign, the experiment was embedded in two real election campaigns, and the information used in the study was drawn from actual party platforms. Only the election polls and coalition signals were manipulated within a plausible range. A crucial advantage of such an approach is the possibility to tap into and use the actual party preferences of participants, making a strategic voting decision more ‘costly’ compared to purely fictional parties and campaigns. At the same time, this approach allows for the random assignment of participants to different poll-based scenarios to test whether different ‘objective’ conditions of close elections have the expected effect on strategic voting.

### **The electoral context**

The study took place in January 2006, at the beginning of two contemporaneous election campaigns in the two adjacent German states of Baden-Württemberg and Rhineland-Palatinate. Both elections were held on 26 March. Both states share a number of relevant characteristics. First, the five parties that could reasonably be expected to enter parliament were identical and included two large parties – the conservative Christian Democrats (CDU) and the left-of-centre Social Democrats (SPD) – as well as three smaller parties: the liberal Free Democrats (FDP), the environmental Green Party (Greens) and a new far-left party (WASG/Die Linke), drawing mostly on disaffected and/or former members of labour unions and the SPD. Second, both states were governed by fairly popular coalition governments with one large and one small party, making any dramatic electoral volatility highly unlikely (but also limiting plausible manipulations of electoral closeness to the three small parties). Third, both states use an electoral system with proportional representation in which voters have a single party list vote that determines who will be represented in the state parliament.<sup>1</sup> Parties have to pass a 5 per cent minimum vote threshold to enter parliament. Fourth, the party

platforms in both states were, for all practical purposes, identical except for state-specific differences and issues. None of the latter played any notable role during these campaigns.

Despite all these commonalities, there was one crucial difference between the states: two different coalition governments. Baden-Württemberg was governed by a CDU-led coalition, while Rhineland-Palatinate was governed by an SPD-led coalition. In both cases, the FDP was the junior coalition partner. While re-election of the two coalitions was the most likely outcome in each state, it was also quite plausible that the Greens might replace the FDP as the junior coalition partner, depending on the election outcome. In comparison, the electoral strength of the new WASG was much more uncertain, and the likelihood that it would join a coalition, even with the left-of-centre SPD, extremely small.<sup>2</sup>

Taken together, the two states offered the opportunity, just before the start of the actual election campaigns, to create scenarios that would either facilitate or inhibit strategic voting, depending on different but plausible polls and coalition signals. Because there was no doubt that the incumbent major party would again be the winner in each state, the plausible manipulations had to focus on the expected performance of the three small parties, including whether they would successfully pass the 5 per cent threshold to enter the state parliament and whether one of them would pull ahead of the other two small parties. Given the many similarities, it was possible to create equivalent contexts or decision scenarios by *systematically* 'sending' study participants to the state that best matched their political preferences while *randomly* manipulating the factors of interest, polls and coalition signals.

## Method

### *Participants*

A total of 280 students (105 female and 169 male; mean age 25 years, ranging from 18 to 50 years) participated in the computer-based experiment conducted at the beginning of, and embedded in, two German state election campaigns in January 2006. For the analyses, only the 200 participants who were eligible to vote in German elections were used.<sup>3</sup> The participants took about 50 minutes to complete the study and received €7 for their participation. Participants were told that the purpose of the study was to investigate how voters inform themselves during an election campaign. More specifically, they were asked to take on the role of a voter and prepare to vote in



the upcoming state election by choosing and reading information about the parties and the campaign (including the manipulated and unobtrusively embedded polls and coalition signals).

### *Information search: Process tracing with a dynamic information board*

Study participants were exposed to a stream of quickly changing campaign information on a dynamic information board. The information covered party positions on various issues as well as poll results and coalition signals. Similar to Lau and Redlawsk (2006) and Meffert et al. (2006), the information board displayed information sequentially. Out of necessity, participants were forced to be selective in their choice of messages based on short headlines. Custom-developed software was used to both present and track the information selection behaviour of the participants. Unlike earlier information board designs (Huang & Price 2001; Lau & Redlawsk 2006), our information board did not use labels such as 'political experience' or 'position on abortion' to categorise and pre-sort the headlines according to specific types of information. Instead, the information appeared as an apparently random stream of messages similar to newspaper headlines on a website (e.g., 'CDU proposes a privileged partnership with Turkey').

### *Campaign information*

The campaign information consisted of 90 headlines and articles that were presented on 15 sequential screens, always with six headlines visible on one screen (Figure 1). Each screen was called a 'week' to simulate and highlight the passing of time until the election. A total of 75 headlines and articles were party-specific and covered the five relevant parties running in each election (CDU, SPD, FDP, Greens and WASG). For each party, the information covered the two leading candidates as well as the official party positions on 13 different issues (including fairly generic topics such as innovation and the economy, and fairly specific and current topics such as the introduction of tuition payments at universities, the fight against bird flu and prohibitions against state employees wearing a veil). The remaining 15 articles were split evenly between five covering manipulated pre-election polls (see below), five about other real but generic polls without any immediate electoral implications such as the popularity of state politicians or satisfaction with one's personal financial situation, and five purely informational articles about each state's current issues or political history.

# Landesanzeiger Rheinland-Pfalz

Letzte Meldungen vom Wahlkampf

Wochen bis zur Wahl: 14

Umfrage: Zufriedenheit mit persönlicher finanzieller Lage überwiegt

Politiker der WASG kritisieren Hartz IV-Gesetze

CDU: Besonderer Wert von Ehe und Familie muss geschützt werden

Grüne sehen in Qualifikation wichtigste Ressource Deutschlands

FDP fordert Bekämpfung des Sozialmissbrauchs

SPD-Politiker fordern bildungspolitischen Aufbruch

## Politiker der WASG kritisieren Hartz IV-Gesetze

Laut Politikern der WASG herrscht bei der Umsetzung der Hartz IV-Gesetze Chaos. Betroffene seien immer wieder mit fehlerhaften Bescheiden und gestressten Sachbearbeitern konfrontiert. Deshalb fordert die WASG eine Änderung der Hartz IV-Gesetzgebung.

Dazu gehören unter anderem die Anhebung des Arbeitslosengelds II in Ost und West, höhere Freibeträge für Ersparnisse, eine deutliche Verbesserung der Zuverdienstmöglichkeiten und die Streichung der Anrechnung des Kindergeldes bei Arbeitslosengeld-II-Empfängern.

Ein zentrales Element für die Weiterentwicklung sozialer Sicherungssysteme ist für die WASG die schrittweise Einführung einer am Bedarf orientierten sozialen Grundsicherung. Ihr Ausbau zu einem Bürgerrecht stellt einen Rückhalt für individuelle Freiheit dar. Um dieser Grundsicherung den Weg zu ebnen, unterstützt die WASG die Forderung nach Einführung von Mindestlöhnen. Dringend geboten sind außerdem Regelungen, die Kinderarmut verhindern.

Schließen

Figure 1. Screenshots of front page and article page of information board.

*Manipulation of polls and coalition signals*

The poll results were manipulated to affect the expectation of how close the upcoming election would be. Manipulation was made possible by the fact that the study took place shortly before the actual campaigns got under way and the media started to report about polls. Outside election campaigns, media reports about state-level polls are very rare in Germany. At the same time, the manipulations had to be plausible and were thus constrained by the political reality in the two states. Because the large party in each state was expected to win by large margins, the poll manipulation focused on the more uncertain outcome for the three small parties. As potential coalition partners of the respective large party, they would play a pivotal role in the formation of the new government.

At the beginning of the study, participants were asked to provide a preference ranking of the five parties. This ranking was used for the conditional or *systematic* assignment of participants to standardised and comparable electoral scenarios. First, participants were assigned to the state in which their highest ranked major party was the incumbent and was expected to win again in the upcoming election (CDU in Baden-Württemberg and SPD in Rhineland-Palatinate). Second, the highest ranked small party of each participant was used for the poll and coalition signal manipulations (described below). The small party was assumed to represent the preferred coalition partner for the preferred large party.<sup>4</sup> Third, depending on which party was ranked highest overall, participants were categorised as either major-party (CDU, SPD) or small-party (FDP, Green Party, Left Party) supporters. The latter categorisation determined how the poll manipulation would create a close election outcome based on the 5 per cent threshold.

Next, participants were *randomly* assigned to one of three poll conditions that suggested election outcomes of varying closeness. First, in the *control* condition, the preferred major party ('41 per cent') and the preferred small party ('10 per cent') were expected to comfortably win the election and constitute the only feasible coalition (with the obvious exception of a grand coalition between the two major parties – an outcome that was not considered likely in either state). Second, in the *close* election (or failure) condition, the preferred small party was either just on the threshold required for entering parliament and thus in acute danger of failing ('5 per cent', for major party supporters) or just below the threshold and thus expected to fail to enter parliament ('4 per cent', for small party supporters). In both cases, the polls created classic scenarios for strategic voting. Major party supporters might decide to defect from their safe and dominant major party and cast a rental vote for the preferred small coalition partner to ensure this party's entry into

parliament. Small party supporters on the other hand should realise that their vote would be wasted on a party that had no chance to enter parliament, and that it could be better used for a party with a realistic chance of becoming part of the next government. Third, in the *competition* condition, the three small parties were running neck-and-neck, with about '7 per cent' each. This scenario provided an incentive for strategic voting for major party supporters (to give the preferred small party an edge over the competitors) but should work against strategic voting among small party supporters who would rather be motivated to support and strengthen their preferred party. Participants were assigned to the three conditions with 20, 50 and 30 per cent probability (with the assumption, based on a pilot study, that participants would be split about evenly between major party and small party supporters). For the analyses reported below, the different conditions are combined in two categories depending on whether or not the poll created a *close election outcome* assumed to facilitate strategic voting or a *safe outcome* without an incentive for strategic voting.

In addition to the poll manipulation we employed a coalition signal manipulation, operationalised in a fairly straightforward manner. The poll articles either made no reference to possible coalitions at all, or mentioned a coalition of preferred major and minor party by letting prominent politicians in each party express support for this coalition.<sup>5</sup> The signals were embedded in typical headlines and slogans used during elections – for example, stating that politicians of the preferred major party were 'hoping for a coalition with [preferred small party]' or that politicians of the small party are 'appealing for "rental votes" of [preferred major party] supporters'. The two signal conditions were assigned randomly with even probability and independent of the poll condition.

Participants encountered the manipulated information in two ways. Early during the information search, after two screens with headlines, all participants were asked to participate in a pre-election poll. After answering the poll, they were shown a results page (Figure 2) which presented a table with the manipulated poll results on the left and a short verbal summary of the results on the right, highlighting the closeness of the poll for those who failed to draw these conclusions from the numerical table on their own. At the bottom, two brief statements attributed to the two preferred parties of each participant, again in newspaper headline format, were used for the coalition signal manipulation. All participants encountered and read this page before continuing with the information board task.

The second opportunity to encounter poll results was as part of the information displayed on the information board. The five articles covering the manipulated polls (out of 90 in total) presented the same poll results and

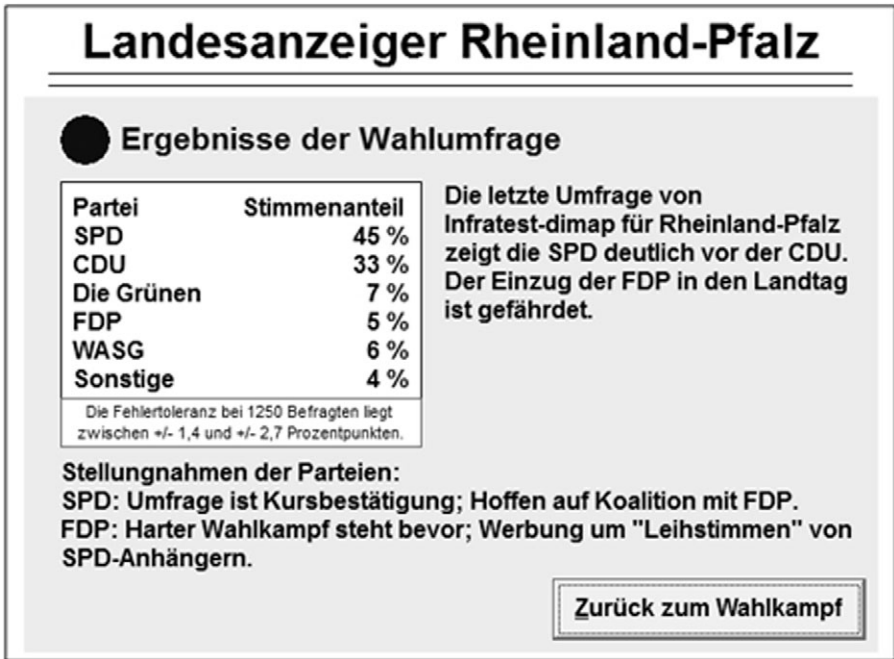


Figure 2. Poll results page after pre-election poll.

coalition signals and only framed them differently by highlighting different aspects. These five articles were phrased identically. Only the names of the parties were automatically substituted depending on the party preferences of a given participant. Unlike the poll results page described above, participants had to deliberately select and read these five articles. Consequently, the articles offer a hard behavioural test of attention to pre-election polls.

### *Procedures and measures*

Participants started by indicating their position on or agreement with 14 political issues (see Figure 3 for an outline of the study). Next, they were asked to rank the five parties by preference. These responses were used for the systematic assignment to the poll and signal conditions as described above. Participants read a brief introduction to the state election campaign of the assigned state, followed by an introduction and trial run of the information board. After completing the trial run, the main task of the study started. The 90 headlines were presented on the information board, always six headlines on each screen that remained visible for a fixed interval of 45 seconds. All

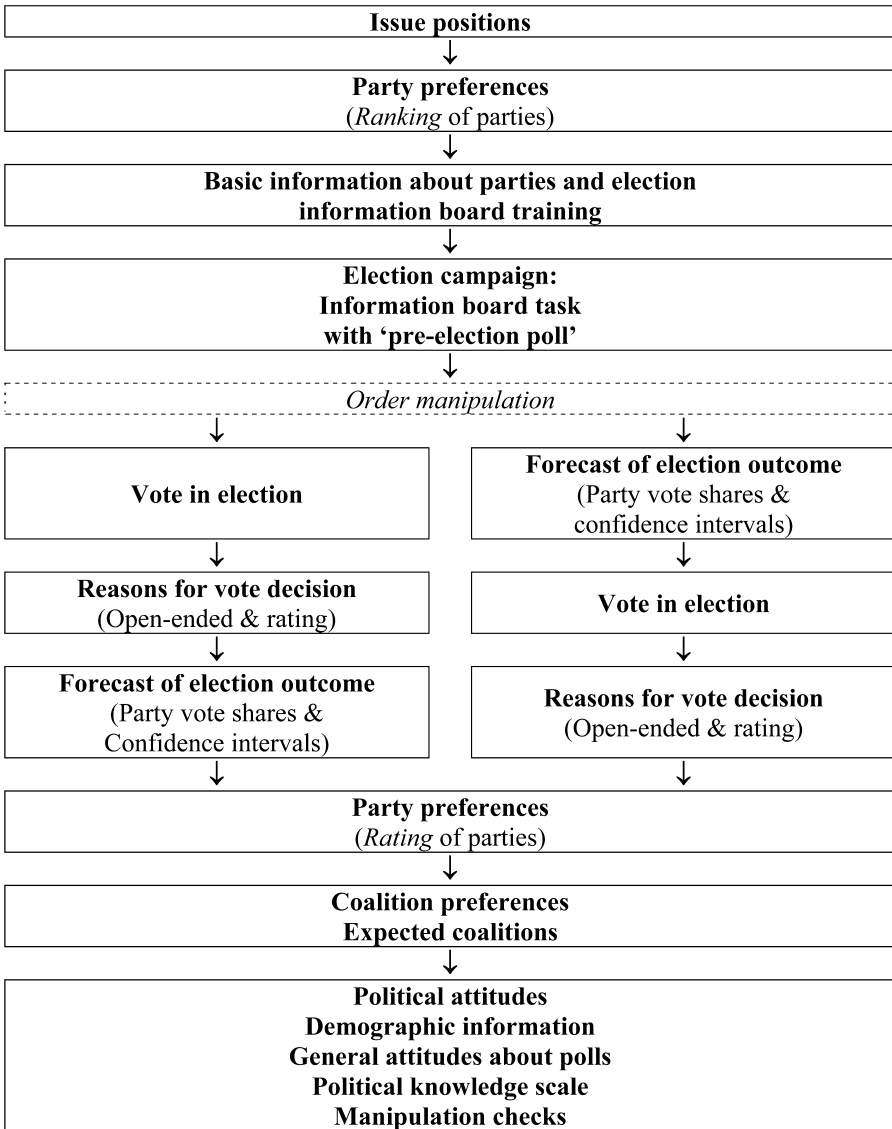


Figure 3. Plan of study.

participants encountered the same 90 headlines, but their order was randomised similar to a quota sample. The six headlines on each screen always matched the six information categories defined by the five parties (issue positions or candidate information) and the sixth category with poll or other

state-specific information – that is, one headline each. The order of the 15 articles within each information category and the order of the six headlines on each screen were randomised for each participant.

Participants were instructed that they could choose any article for reading by clicking on the headline. The associated article with a length of approximately 120 words opened in a window partially covering the headline page of the information board (Figure 1). The article page remained open until it was closed again by the participant. Participants were allowed to read as many articles as they wanted, but even while they were reading an article, the headlines on the front page continued to change at the fixed interval of 45 seconds. After the first two screens, the search was interrupted and paused for the pre-election poll that asked participants to indicate their party preference at that time, including an additional ‘don’t know’ option. It was followed by the results page which summarised the manipulated polls and coalition signals (Figure 2).

After the information search ended, participants were asked to vote for their final party choice, followed by an open-ended listing of reasons for their vote as well as an agreement rating with various reasons frequently given by voters. The latter reasons included one statement typical for strategic voters (Fisher 2004) – ‘My preferred party has no chance’ – as well as one about habitual party voting, a behaviour that should work against strategic voting: ‘I always vote for this party.’ Participants indicated the degree to which these reasons applied to their vote decision on a five-point rating scale. Participants were also asked to make a forecast of the election outcome, including precise party vote shares and a (predicted) 90 per cent confidence interval – that is, the upper and lower bound for each party vote share prediction. Given the difficulty of this task, the software assisted the participants by requiring party vote share predictions to add up to 100 per cent and constrained the predicted upper and lower limits for each party vote share prediction to be below or above (or similar to) these forecasts. Participants had to provide complete forecasts before continuing.<sup>6</sup> For the analysis, the accuracy of these forecasts was determined by subtracting the manipulated poll results from each participant’s party vote share predictions. The absolute values were averaged to calculate the mean absolute error (MAE) of the predictions. The MAE measures the extent to which the predictions deviate from the polls.

The study continued with detailed questions about party and coalition preferences and other political orientations of the participants. Standard measures relevant for the subsequent analyses are political interest and the strength of party identification. Participants listed their demographics (e.g., sex) and were asked about their general attitudes towards polls. More specifically, they were asked about their attention to polls before elections (five-point

scale), the perceived accuracy of polls (four-point scale), whether they usually consider polls when making a vote decision (five-point scale), and about the approximate time of their last encounter with actual, state-specific polls (six response options).<sup>7</sup>

At the end, participants responded to an open-ended political knowledge scale that included 14 factual questions about the offices or positions of various national and international politicians (or vice versa) as well as questions about the political system, with all items unrelated to the two states in our study (mean = 6.59, SD = 3.10,  $\alpha = 0.80$ ).

## Results

### *Attention to polls and the accuracy of poll and coalition signal perceptions*

Participants selected and read, on average, 29 articles including about two articles (out of five) covering manipulated polls and coalition signals (Figure 4). Together with the poll results page seen by every participant, they did have a fairly high chance of encountering the poll information repeatedly. The interest in poll-related articles was even higher if the articles with generic (not manipulated) poll information were included in the count. On average, participants read 1.7 generic poll articles (out of five) covering the popularity of state politicians, surveys about satisfaction with the personal financial situation and similar topics. At the same time, the articles covering polls were clearly not the primary interest of the participants. With an average of slightly more than seven articles, participants paid by far the most attention to information about their most preferred party. In fact, the attention to articles about the different parties tracks perfectly with the party ranking given by the participants at the beginning of the study.

To better assess who pays attention to poll information, the number of manipulated poll articles (0 to 5) read by a participant was regressed on two self-reported indicators of political motivation, political interest and strength of party identification, an indicator for small party supporters, and the factual political knowledge scale. In addition, three general attitudes or opinions about polls that might affect attention to polls were included as well: attention to pre-election polls in general, the perception of the accuracy of polls and the extent to which a participant usually considers polls when making a vote decision. Because preliminary analyses showed that the sex of the participant had a surprising and unexpected effect on this and some subsequent models, this demographic variable is included in the model as well.



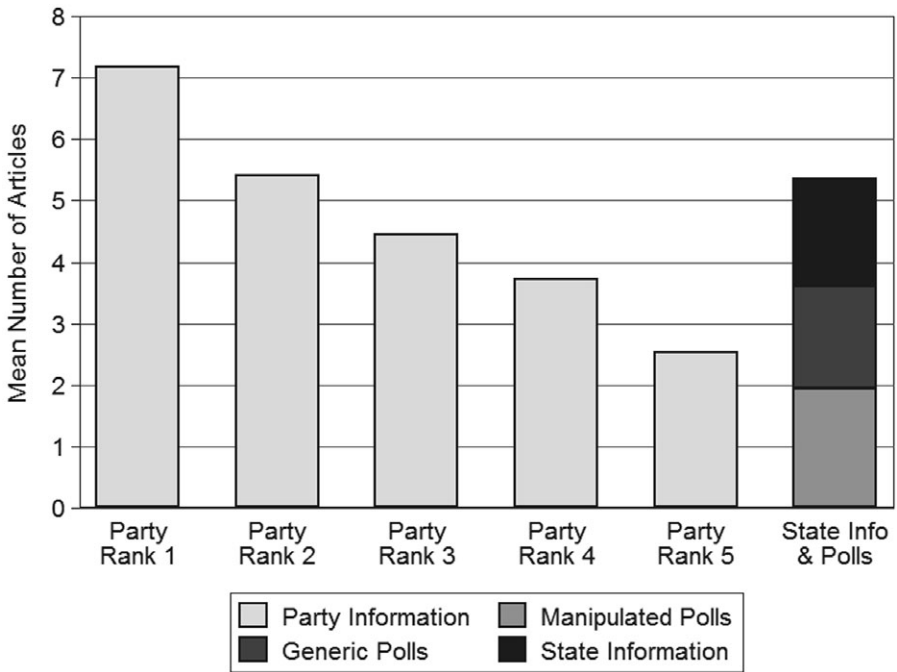


Figure 4. Selection of articles by category.

Notes: Bars represent the average number of articles selected for reading in six different headline categories. Each category was represented with one randomly chosen headline on each of the 15 screens. The party categories are based on the initial party rankings provided by each participant.

The results show that neither the two political motivations nor the status as a small party supporter affected the selection of poll articles, even though strength of party identification comes very close to standard levels of significance (Table 1).<sup>8</sup> Instead, general political knowledge emerges as a highly significant predictor of attention, supporting the notion that political knowledge – representing better developed cognitive capacities for political information – increases interest in more complex and horse-race-related political information. This finding is further supported by the fact that self-reported attention to (or interest in) polls in general does not affect the actual selection of such information. Only agreement with the goal-directed attitude of using polls for the vote decision has a significant and positive impact. In addition, male respondents were significantly more likely to select poll articles. In short, attention to polls appears to be goal-driven and more common among political sophisticates.

Moving from the quantity of exposure to the quality of poll perceptions, we investigated whether participants used this information to form and calibrate

Table 1. Attention to poll articles

	Number of poll articles selected	
	B	SE
Knowledge	0.09*	(0.04)
Strength of PID	0.17	(0.10)
Political interest	0.13	(0.17)
Small party supporter	0.19	(0.19)
Attention to polls (in general)	0.19	(0.14)
Accuracy of polls (in general)	-0.16	(0.18)
Use of polls (in general)	0.22*	(0.10)
Sex (male)	0.58**	(0.22)
Constant	-0.25	(0.50)
F		7.27**
Adj. R <sup>2</sup>		0.20
N		200

Note: Entries are unstandardised regression coefficients, with standard errors in parentheses. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

their predictions about the outcome of the election. To assess this impact, we first looked at the most critical component of the poll manipulation: the forecasts for the most preferred small party. As Figure 5 shows, the poll manipulation was successful, at least in relative terms. The average predicted vote share for the most preferred small party declines significantly with lower poll values, from a high of 9.8 per cent in the control condition ('10 per cent') to a low of 6.4 per cent in the failure condition ('4 per cent') ( $F = 9.85$ ,  $p < 0.001$ ). The same applies to the predicted lower limit of the party vote share, ranging from 6.6 to 4.1 per cent ( $F = 18.59$ ,  $p < 0.001$ ), and the predicted upper limit of the vote share, ranging from 12.8 to 6.6 per cent ( $F = 10.64$ ,  $p < 0.001$ ). Even though the manipulated polls significantly affected the forecasts, the latter are still subject to considerable projection effects. On average, participants added between 1.7 and 2.9 percentage points to the polls, expecting the preferred small party to perform better than predicted by the reported polls. The only exception is the control condition with an already high '10 per cent' poll.

Even in the failure condition, the party is expected to safely pass the 5 per cent threshold. For this reason, the predicted lower limit of the 90 per cent confidence interval becomes critical. This prediction most clearly reflects the intent of the poll manipulation, to create uncertainty due to a close election. In the two safe conditions ('10 per cent' and '7 per cent'), the predicted lower

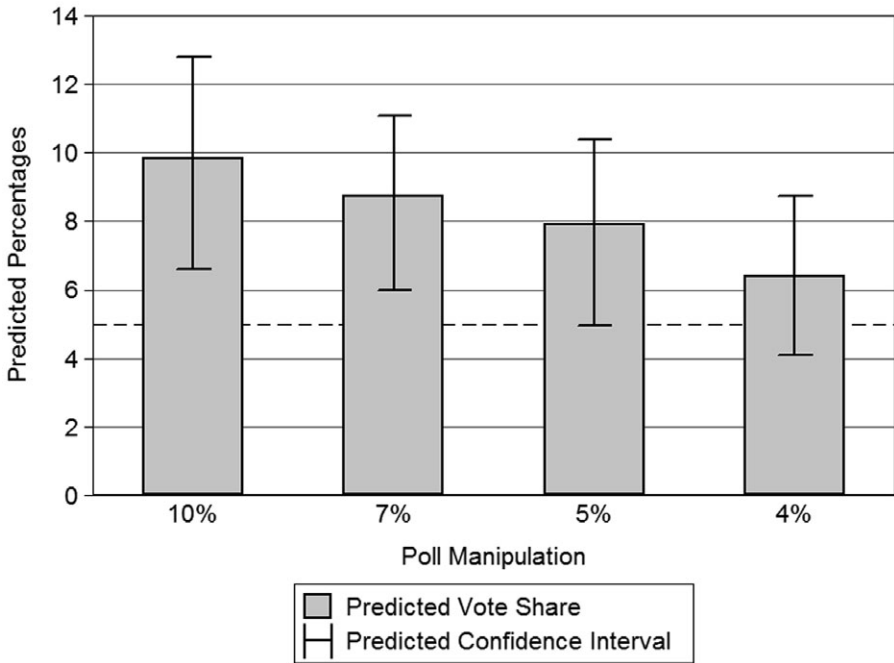


Figure 5. Predicted vote shares and confidence intervals for the preferred small party.

Notes: A one-way ANOVA test of the poll manipulation shows significant effects on the predicted vote share ( $F[3,196] = 9.85, p < 0.001$ ), the predicted upper confidence interval ( $F[3,195] = 10.64, p < 0.001$ ) and the predicted lower confidence interval ( $F[3,195] = 18.59, p < 0.001$ ).

limits are on average well above the 5 per cent threshold. In the two conditions with a close outcome ('5 per cent' and '4 per cent'), the lower limits match the polls with 4.8 and 4.1 per cent more or less perfectly. In short, participants had the tendency to overestimate the chances of the preferred small party, but clearly perceived the risk of failure when suggested by the polls. Overall, the poll manipulation can be considered successful.

Our hypotheses suggest that political sophisticates not only pay more attention to poll information, but are also able to make more accurate forecasts. Participants driven by partisan preferences, on the other hand, should neither have a particular interest in polls nor the motivation to make accurate forecasts. We regressed the mean absolute error (MAE) of the party vote share predictions, the average deviation from the reported and manipulated poll results, on several predictors. These include again the two political motivations political interest and strength of party identification, the indicator for small party supporters, as well as political knowledge. A new and important

predictor of accurate perceptions is the number of articles with poll information read by a participant. Because political knowledge already affects the selection of articles, it is possible that the impact of reading articles differs for different levels of knowledge. On the one hand, political sophisticates should be better able to understand and use poll information. On the other, political sophisticates should be able to quickly understand the implications after seeing only a single poll article. Reading additional articles covering the same poll results therefore may not improve the accuracy of predictions any further. It is more reasonable to expect that those participants low in political sophistication would benefit more from repeatedly reading the same information. In short, while both political knowledge and the reading of additional poll articles can be expected to reduce prediction errors, the interaction of both variables should show a declining error-reduction effect of reading more articles as political knowledge increases. To control for the possibility that exposure to real polls before participating in the study had influenced the participants, a dichotomous indicator is included for those who reported recently encountering state-specific polls.<sup>9</sup>

While the prediction error model has only modest explanatory power (Adj.  $R^2 = 0.17$ , Table 2), it demonstrates again the important role of political sophistication, along with a conditional effect of reading additional poll articles. Both political knowledge and poll articles significantly reduce the errors in the forecasts and show a significant interaction effect as well. According to the latter, the error reducing effect of reading poll articles diminishes with increasing levels of sophistication and, in fact, completely disappears for high sophisticates (Figure 6). In other words, the fact that high sophisticates read more poll articles does not appear to provide any additional benefit for improving forecasts. Those participants low in political knowledge can improve the accuracy of their predictions rather dramatically by reading more articles. They can even close the gap to high sophisticates. Thus, high sophisticates are again the winner of the contest, but the lead is not unassailable.

In contrast to the poll attention model, small party supporters emerge as being more accurate in their predictions than major party supporters, offering support for the notion that this information is more important to them. It should also be noted that there were no sex differences in the forecast error model, and that previous and recent exposure to polls in the media did not have any effect on the accuracy of the predictions.

The second manipulation involved the presence or absence of a coalition signal for the preferred major and small party of each participant. At the end of the study, participants were asked whether they had noticed such a coalition signal (between the expected winner – the preferred large party – and each of the three small parties as well as a ‘none’ and a ‘don’t know’ option). The fairly

Table 2. Errors in poll perception

	Mean absolute error (MAE) of all party vote share predictions	
	B	SE
Knowledge	-0.68**	(0.19)
Poll articles (N)	-0.34**	(0.07)
Poll articles x knowledge	0.08**	(0.02)
Strength of PID	0.05	(0.11)
Political interest	0.36	(0.20)
Small party supporter	-0.75**	(0.22)
Sex (male)	-0.14	(0.26)
Polls seen	-0.28	(0.32)
Constant	4.32**	(0.48)
F		6.17**
Adj. R <sup>2</sup>		0.17
N		200

Notes: Entries are unstandardised regression coefficients, with standard errors in parentheses. The mean absolute error (MAE) represents the average absolute prediction error of the predicted party vote shares (compared to the manipulated poll results). \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

subtle signal manipulation did affect the signal perception, increasing the perception of the preferred parties-coalition from 14.8 per cent without signal to 45.7 per cent with the signal while 'no signal'-perceptions dropped from 56.5 to 34.8 per cent and 'don't know' responses from 24.1 to 13.0 per cent. A wrong perception of a different coalition was fairly low in either case: 4.6 and 6.5 per cent, respectively ( $\chi^2[3] = 24.83, p < 0.001$ )<sup>10</sup> In short, the signal manipulation was successful as well.

We used the dichotomous indicator of noticing a coalition signal for the two preferred parties as our dependent variable and regressed it on the randomly assigned coalition signal condition (present or not) as well as the same predictor variables used above: political interest, strength of party identification, number of poll articles, political knowledge and small party supporter (except the irrelevant question about encountering polls). The results differ from the poll model in one crucial respect: political knowledge does not affect the perception of the coalition signal, nor does the status of a small party supporter (Table 3). The presence of a coalition signal had a strong impact, increasing the likelihood of perceiving the correct signal by 38 percentage points.<sup>11</sup> Reading

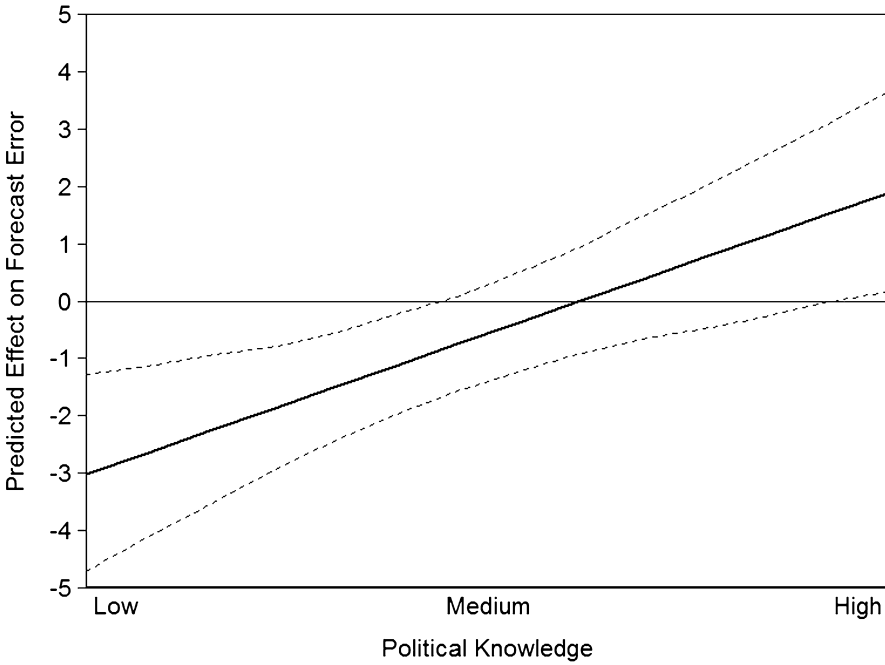


Figure 6. The effect of reading poll articles on forecast errors conditional on political knowledge.

Notes: The line shows the predicted effect of reading five (versus none) poll articles on the mean absolute prediction errors (MAE) at different levels of political knowledge. The dotted lines represent the 95 per cent confidence interval of the predictions (simulated with the Clarify module for Stata).

additional poll articles with the included, manipulated signal also contributed to such a perception by up to 67 percentage points. The interaction of knowledge and poll articles, however, failed to have a significant impact. The coefficients suggest that those participants with low levels of political knowledge benefited most from reading. Finally, the strength of party identification had a significant impact, increasing the likelihood of perceiving the signal by up to 25 percentage points. These results suggest that political knowledge is not important for picking up coalition signals, maybe because political sophisticates are already aware of the possible coalitions and/or because they discount any explicit signals sent out by the parties during campaigns. Much more sensitive to such signals are those participants who identify more strongly with one of the parties, whether large or small. The partisan signal identifies the party with whom they have to ‘share’ their party preference in a coalition.

The picture that emerges from this first part of the analysis is fairly straightforward. Political sophistication increases interest in articles with poll

Table 3. Perception of coalition signal

	Correct perception of coalition signal	
	B	SE
Coalition signal (present)	1.78**	(0.38)
Poll articles (N)	0.80*	(0.33)
Knowledge	0.13	(0.12)
Poll articles x knowledge	-0.07	(0.04)
Strength of PID	0.44*	(0.20)
Political interest	0.11	(0.30)
Small party supporter	-0.43	(0.37)
Sex (male)	0.92*	(0.45)
Constant	-4.98**	(1.03)
$\chi^2$		49.87
N		200

Notes: Entries are unstandardised logistic regression coefficients, with standard errors in parentheses. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

information and also leads to more accurate forecasts of the election outcome. Reading additional poll articles did not improve the forecasting ability of high sophisticates beyond the single exposure to the pre-election poll on the results screen. However, low sophisticates, much more error-prone in their predictions, had an opportunity to overcome this disadvantage. If they made the effort to read more articles with poll information, they were able to compensate the knowledge advantage of high sophisticates. It is important to keep in mind, though, that, on average, low sophisticates read fewer poll articles and thus usually do not use this opportunity to catch up. Thus, closing this knowledge gap is possible in theory, but rarely accomplished in practice. Partisan signals, on the other hand, were more likely to be picked up by the highly partisan, irrespective of political sophistication. Partisan voters appear to pay more attention to statements by party representatives and the potential alliances they propose. So far, the results conform to the assumptions of the theory of strategic voting and suggest that voters, if motivated to maximise the expected utility of their vote decision, can do so by seeking out the appropriate information.

#### *Effect of close polls and coalition signals on strategic voting*

The second and more critical question is whether close polls and coalition signals, actual or perceived, increase the likelihood of voting for a party other

than the most preferred party. For theoretical as well as substantive reasons, we carefully distinguish explicit strategic voting from so-called ‘*insincere* voting’ – that is, any vote for a different party than the one preferred most or ranked highest. To be classified as a *strategic* voter, participants not only had to vote for a party other than the one ranked highest – or any other party that was tied (rated the same) with this party – but also volunteer at least one strategic reason for their vote decision in the open-ended listing task after the final vote. Any reference to polls or the chances of parties in the upcoming election was considered to be a strategic reason. These two operationalisations of strategic voting immediately translate into vastly different frequencies. While there are 48 (24 per cent) *insincere* voters in our sample, the number drops to only 10 (5 per cent) *strategic* voters. The different nature of these two groups comes in even sharper focus when we look at the circumstances under which they defect from the preferred party. For *insincere* voters, it did not matter whether or not the manipulated polls created a close condition that warrants strategic voting. They were equally likely to cast an *insincere* vote under close and safe conditions, with 23.7 and 24.6 per cent in each case. Explicit *strategic* voters, on the other hand, voted this way only when the polls suggested a close election (7.4 per cent). Without the incentive of a close election, and consistent with our expectation, not a single *strategic* voter was found.

This result supports the theory of strategic voting but also suggests that there are very few voters who can be classified as genuine *strategic* voters, even when provided with the opportunity.<sup>12</sup> Given the low number of just ten explicitly *strategic* voters, it is not possible to conduct further in-depth analyses of this group. Instead, we focus on the much larger group of *insincere* voters and assess the factors that lead to defections from the preferred party. Given the initial evidence against objective closeness as an explanatory factor for defection, it might in fact be the individually *perceived* closeness that matters most. A *strategic* voter could very well dismiss or distrust the current polls and, for example, expect a tightening race just before the election. Consequently, we include not only the objective poll or closeness manipulation in the model, but also two subjective measures of closeness: the perceived (absolute) distance of the preferred small party from the 5 per cent threshold as well as the endorsement of the generic statement that ‘the preferred party does not have a chance’. A similar strategy is used for the coalition signal manipulation by including dichotomous indicators for the signal manipulation as well as the signal perception. In order to make the effects of objective and perceived indicators more transparent, the model is reported with and without the perceptions. Four additional variables capture key aspects of participants’ party and policy preferences that should either facilitate defection (absolute ideological distance of voters from their preferred party on an eleven-point



left-right scale) or inhibit defection (party preference measured as evaluative distance of the preferred party from the party rated second highest on an eleven-point rating scale, strength of party identification and endorsement of the statement that the voter ‘always votes for this party’). Finally, political knowledge, small party supporter and sex of the participant were included as control variables.

As expected, the manipulated poll condition did not have any direct effect on insincere voting, no matter whether or not perceived closeness is included in the model (Table 4). Yet if the perceived distance of the preferred small party from the threshold increases, the likelihood of defection declines for a typical voter by up to 10 percentage points, and those who felt that their ‘preferred party had no chance’ became up to 40 percentage points more likely to defect.<sup>13</sup> A similar but weaker pattern emerged for the coalition signal. The manipulated coalition signal does not induce insincere voting directly, with or without perceptions. Once the perceived coalition of the two preferred parties is included, the signal perception increases defection by up to eight percentage

Table 4. Effect of close polls and coalition signals on insincere voting

	Insincere vote			
	<i>Without perceptions</i>		<i>With perceptions</i>	
	B	SE	B	SE
Close poll (manipulation)	-0.18	(0.48)	-0.51	(0.52)
Perceived distance from threshold			-0.24*	(0.11)
‘Party no chance’ (agreement)	0.79**	(0.23)	0.77**	(0.25)
Coalition signal (manipulation)	0.72	(0.44)	0.51	(0.48)
Coalition signal (perception)			1.00 <sup>+</sup>	(0.57)
Ideological distance	0.43 <sup>+</sup>	(0.24)	0.45 <sup>+</sup>	(0.26)
Strength of PID	0.04	(0.21)	-0.09	(0.22)
Party preference	-0.70*	(0.33)	-0.71*	(0.34)
‘Habitual party voter’ (agreement)	-0.99**	(0.22)	-1.10**	(0.24)
Knowledge	0.18*	(0.08)	0.16 <sup>+</sup>	(0.09)
Small party supporter	0.32	(0.47)	0.43	(0.50)
Sex (male)	-1.26*	(0.51)	-1.69**	(0.57)
Constant	-0.80	(0.89)	0.62	(1.01)
$\chi^2$	75.71		85.38	
N	200		200	

Notes: Entries are unstandardised logistic regression coefficients, with standard errors in parentheses. <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ .

points. In both cases, the perceptions of closeness and coalition signal mattered, while the objective cues failed to translate directly into behavioural intentions. However, as shown above, the objective conditions affect the respective perceptions and thus exert an indirect effect.

Political predispositions, with the exception of the strength of party identification, mattered as well and in the expected directions. As the ideological distance of the preferred party increased, defection became more likely (up to 17 points). Defection became less likely as the party preference for the preferred party increased (up to 10 points). Most strikingly, self-described 'habitual party voters' were much less likely to defect than swing voters (up to 28 points). Finally, political sophisticates were marginally more likely to vote insincerely (up to 13 points), while male respondents were 17 percentage points less likely to defect. In summary, insincere voting is caused by a variety of factors. The key contextual cues for strategic voting – polls and coalition signals – only play an indirect role.

## **Conclusion and discussion**

The goal of this study was to test key theoretical assumptions and causal claims about strategic voting by investigating the attention to and perception of pre-election polls and coalition signals. By embedding a laboratory experiment in a real election campaign, participants encountered credible and realistic election scenarios while at the same time allowing the unobtrusive manipulation of the causal factors of interest. The experimental design allowed us to create theoretically relevant scenarios, customised to participants' actual party preferences, and gave us the opportunity to measure participants' information selection behaviour and prediction abilities in unusual detail. This made it possible to put some basic assumptions about strategic voting to a real micro-level test – something that is not possible with survey-based designs. Due to the small and non-representative sample and the country-specific context, our conclusions are necessarily more tentative and require further corroboration with future research.

Substantively, we found that participants were, on average, able to translate poll information into reasonable election forecasts. By looking at the accurate perception of polls and coalition signals embedded in a steady stream of political information within our dynamic information board set-up, two strikingly different findings emerge. First, voters seem to acknowledge polls by adjusting their forecasts accordingly, despite engaging in modest wishful thinking in favour of the preferred small party. Political sophisticates appear to quickly adjust their forecasts of the electoral outcome to the polls, even

without seeking out additional information (which they do nevertheless). More importantly, however, less knowledgeable voters can, if they are motivated and decide to do so, catch up by seeking out the appropriate information. Thus, any voter can easily acquire the information necessary for meaningful expectations and sophisticated vote decisions, but very few seem to take full advantage of this opportunity – at least in our laboratory experiment. Therefore, the findings of the poll perception model are consistent with the assumptions of the strategic voting literature – in particular that political sophisticates are usually aware of the (poll-based) electoral chances of the parties.

Coalition signals, on the other hand, seem to follow a different dynamic. The successful detection of coalition signals is not dependent on political sophistication, but rather driven by partisan predispositions. Those who identify more closely with a party appear to also be more sensitive to these partisan signals. If we consider coalition signals as valuable pieces of information for strategic voters, the evidence suggests that campaign managers need to rethink their campaign strategies in terms of coalition signals. The coalition signals reach the wrong audience. Partisan voters who should be least likely to defect from their party and vote strategically are most receptive to these signals (but might abstain if they do not like the indicated coalition partner). Political sophisticates who are better informed and who should be more likely to vote strategically appear to miss these signals. Of course, it is reasonable to assume that high sophisticates do not need to rely as much on explicit coalition signals to develop meaningful expectations about the likely coalitions after the next election.

Our findings raise crucial questions concerning previous assumptions about strategic voting. First, we find a dramatic gap between fairly frequent insincere voting and rather rare explicit strategic voting. Insincere voting might have many different reasons, but according to our study, polls indicating a close election outcome have at best an indirect influence. Two factors seem to entice voters to defect from their preferred party. First, voters who *believe* that their preferred party has no chance in the upcoming election tend to defect from their party, independent of what the polls show. Second, perceived coalition signals by the parties also seem to persuade some voters to defect. If the polls do not justify such behaviour, it is, in instrumental or rational terms, in fact a wrong decision. In both cases, information has at best an indirect influence on voters' behaviour. Individual perceptions and beliefs have a stronger and direct influence. This does not correspond to the assumptions of the classic strategic voter model.

The strategic voter model fares better if we focus exclusively on explicit strategic voting. Such behaviour was only found, as it should be, if polls

suggested a close election. However, the number of voters who explicitly responded to such cues was very small. Taken together, the high number of insincere voters and the low number of strategic voters suggest that researchers have to be very careful about how they classify and interpret voting behaviour that defects from the preferred party. The common practice of survey-based studies to consider all insincere voters as strategic voters appears premature and misleading. And even if voters ‘rent out’ their vote after an appeal by parties, they are not strategic voters in the classic and sophisticated sense without a corresponding readjustment of their electoral expectations. They are rather passive followers of the coalition signals sent out by political parties.

If we consider the findings of our small laboratory experiment together with recent survey-based evidence (e.g., Abramson et al. 2010), we can confidently conclude that strategic voting in multiparty systems with coalition governments is indeed possible, but that many questions remain. A better understanding of strategic and insincere voting in general, and the role and effects of coalition signals in particular, is only possible if more attention is paid to the role of coalition preferences and expectations.

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## Notes

1. Voters in Rhineland-Palatinate also have, besides the ‘second’ party list vote, the option to cast a ‘first’ plurality vote for a candidate in their local district. This vote does not affect the distribution of seats in the state parliament, only the candidates who fill these seats. To maintain equivalent scenarios across states (and experimental conditions), participants in our study could only cast a single party list vote.
2. The most recent and salient reference of electoral success available to voters was the outcome of the general election for the German *Bundestag* on 18 September 2005, several months earlier. All three small parties received approximately the same electoral vote share (FDP: 9.8 per cent; Green Party: 8.1 per cent; Left Party [WASG/Die Linke]: 8.7 per cent).

3. The data from six participants were lost due to technical computer or software problems. Five participants were excluded because they had already participated in the pilot study. Finally, 69 participants who were not eligible to vote in German elections were excluded because their knowledge of German politics was significantly lower compared to native participants and they did not possess the required pre-existing German party preferences. The latter were necessary for the experimental manipulation (described below) and are a prerequisite to identify and analyse insincere and strategic voting (both requiring a vote that deviates from an existing party preference). A large pilot study with the same design was conducted in December 2005 with 94 voluntary, unpaid participants drawn from an equivalent participant pool. While successful, the pilot study led to one design modification: an additional poll condition that represents an explicit and straightforward control condition (as explained later).
4. Participants were explicitly asked about their coalition preferences later in the study. The responses broadly confirmed this expectation.
5. The coalition signals were carefully phrased to be plausible whether or not this coalition represented the incumbent governing coalition in a given state or whether it would involve a new coalition after the election.
6. The order of vote decision (with listing and rating of reasons) and election forecast was randomised, but because no order effects were found, the conditions were pooled and are not further addressed below.
7. In Germany, publicly available polls at the state level are not very frequent and usually do not receive prominent attention in the media unless shortly before the election. The last poll reported in the media preceding this study happened one-and-a-half months earlier. On the second-to-last day of the study, however, the media reported the results of a new poll in one of the states. Of about 40 study participants who could have encountered this poll, only nine reported being aware of it, with no further evidence that this affected their forecasts or the perception of our manipulated polls.
8. The OLS regression and an ordered logistic regression model provide similar results.
9. It is rather unlikely that exposure to published polls would have undermined our manipulation because the real polls were fairly close to our manipulated polls.
10. Test conducted after combining the two 'wrong' coalition perception categories due to a very low number of such responses.
11. The predicted effect sizes in terms of percentage point changes (here and in the subsequent models) were calculated for a typical voter – that is, the independent variables were held constant at their mean or typical values.
12. It is important to note that our definition of a strategic voter does not depend on the manipulated 'objective' poll results, only on explicitly stated strategic reasons for the vote decision. Thus, strategic voters could easily exist in the safe poll conditions – for example, if their subjective predictions about the performance of the parties would differ from the polls. At the same time, our operationalisation fails to count strategic voters who do not volunteer a strategic reason in the open-ended listing task.
13. The endorsement of this statement (by just 11 participants, or 5.5 per cent) is unrelated to both manipulated and perceived polls and the explicit statement of strategic reasons (but more common among small party supporters). Consequently, it does not appear to reflect any obvious considerations consistent with the theory of strategic voting.

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