

## **Ticket-splitting and strategic voting under mixed electoral rules: Evidence from Germany**

THOMAS GSCHWEND

*Zentrum für Europäische Sozialforschung, Mannheim, Germany*

**Abstract.** There is more to strategic voting than simply avoiding wasting one's vote if one is liberated from the corset of studying voting behavior in plurality systems. Mixed electoral systems provide different voters with diverse incentives to cast a strategic vote. They not only determine the *degree* of strategic voting, but also the *kind* of strategies voters employ. Strategic voters employ either a *wasted-vote* or a *coalition insurance strategy*, but do not automatically cast their vote for large parties as the current literature suggest. This has important implications for the consolidation of party systems. Moreover, even when facing the same institutional incentives, voters vary in their *proclivity* to vote strategically.

### **Broadening the scope: Strategic voting in mixed electoral systems**

What is the influence of electoral rules on the way people make decisions in the voting booth? This work attempts to refocus the discussion of the impact of electoral institutions on voting behavior from its narrow focus on single-member plurality systems. The literature on strategic voting agrees that institutional incentives are the driving force that spurs strategic voting. That being said, it is somewhat surprising that this literature has not looked more closely at variations in the main independent variable and studied the effect of a variety of institutional settings on the extent and nature of the strategic voting phenomenon. Similar to a natural experiment, the focus on two-ballot mixed electoral systems offers the opportunity to study influences of electoral rules by holding individual factors constant: The same voter, after all, cast two separate votes – a *candidate vote* and a *list vote* – under different rules.

We know that naively applying behavioral theories without reference to the institutional embeddedness of the act of voting is misconceived. Some voters systematically deviate from their most preferred candidate or party in the voting booth, contrary to what traditional vote choice theories would predict, and cast their vote for a less preferred one. Theories of strategic voting offer an opportunity to extend traditional vote choice predictions in order

to model the act of voting more realistically. Unfortunately, there is no sufficiently developed micro logic to predict under what conditions and under what particular institutional setting we would expect someone to deviate from his or her preferred candidate or party. Moreover, such theories are all the more warranted to provide solid micro-foundations for important macro-level relationships between electoral systems and party systems, which help us to understand the institutional forces that are at work during the development and change of party systems. This is particularly relevant for the consolidation of new democracies.

Recent adoptions of mixed electoral systems, particularly among the new post-communist democracies, have stimulated scholarly interest in these kinds of electoral institutions (Ferrara & Herron 2005). The particular design of mixed electoral systems varies considerably and, consequently, so does the influence of Duverger's (1954) 'mechanical' process and potentially the extent of his hypothesized 'psychological' process that motivate voters to cast a strategic vote. The *kind* of strategies employed, however, pertains to the ballot structure of mixed systems and is therefore comparable across a wide range of mixed electoral systems. Thus being aware of the *kind* of strategies voters might employ in such systems and their consequences for the party system has broad implications for the transformation and consolidation process of newly established democracies.

### **Expectation formation and the proclivity of strategic voting**

Mixed electoral systems are an especially interesting testing ground for studying the influence of electoral institutions on voting behavior. Voters are inclined to employ multiple strategies because of the combination of plurality and proportional voting rules. A *sincere* voter is someone who votes for his or her most preferred party (or party candidate). Conversely, a *strategic* voter is someone who votes for another party (or party candidate) than their most preferred one if he or she expects to be more likely to influence the outcome of this election than by casting a *sincere* vote.<sup>1</sup> Two-ballot systems provide ample opportunity for voters to split their ticket between candidate and list vote in an election for the same level of governance. Voters are said to cast a *straight ticket* if they cast their candidate vote for the local candidate of the same party for which they cast their list vote. Thus, the party of the candidate and party list they vote for are one and the same. Otherwise, they cast a *split ticket*.

Ordinarily, systems with a proportional representation (PR) tier have more than just two parties in parliament, and before an election it is not

fully obvious to voters whether one party will get enough votes to form a single-party majority. In order to best influence the outcome of an election in mixed electoral systems, strategic voters have to deal with the fundamental question: which party will have a chance to gain a majority of the seats to form a government? They have to consider several viable coalitions of parties and split their ticket in a particular way to support their most preferred coalition if the party they otherwise like most is not expected to gain a majority of seats in parliament. This rational is quite different from the typical micro logic presented in the literature about strategic voting in single-member plurality systems where the focus is merely on the success of the most preferred party. Although parties are important in systems with a PR tier, and after all, voters still cast their votes for parties and not for coalitions, voters are used to thinking about possible coalitions of parties as prospective governments (Austen-Smith & Banks 1988; Laver & Schofield 1990; Pappi & Eckstein 1998).

In order to behave strategically in mixed electoral systems, voters have to anticipate the government formation process and form expectations about the success of parties and coalitions. Expectations about the viability of certain candidates, parties or coalitions come into play when voters make a decision whether to desert their most preferred choice and for whom to vote instead. Thus, voters are no mere servants of their preferences, as traditional models of voting behavior would have us believe. Quite to the contrary, as in Goldoni's famous play, voters are 'servants of two masters': their *preferences* and their *expectations*.

There are two main processes by which voters derive expectations. First, attentive voters follow the discussions about coalition options, along with pre-election polls during the campaign. It seems clear, however, that this process can only have an impact on the decision calculus of attentive, and therefore political aware and informed, voters. Since voters do not face a *tabula rasa* situation in the voting booth, there is surely a second process at play through which even voters who do not follow the campaign closely can be seen to form expectations. As 'cognitive misers' (Fiske & Taylor 1991), individuals frequently employ heuristics to simplify their decision-making processes. They are likely to adopt what I call the '*electoral history heuristic*'. Voters look back to previous elections. Even if they cannot recall the correct result of these elections, they can easily form beliefs at least about the rough coordinates of the competitive electoral landscape. Inferences based on these beliefs need not to be particularly accurate. It is sufficient that voters have an idea about who the strong contenders are or which coalitions are typically formed. Both of these processes help voters cope with the uncertainty surrounding an election outcome and generate their expectations about the

success of parties and coalitions. Voters create new expectations or simply update their prior beliefs about the outcome of an election in Bayesian fashion.<sup>2</sup>

### *Two facets of strategic voting*

Strategic votes have a predictable pattern. Given their expectations, strategic voters most likely split their ticket in a particular way to enhance the likelihood of getting their most preferred coalition into government. Although some voters might prefer a three-party coalition, there is no way that, with only two votes, voters could systematically enhance the likelihood of such a coalition. Thus, given that coalitions are (almost) unavoidable, only two-party coalitions can be relevant for the decision-making process of strategic voters. Moreover, a coalition of two small parties is not relevant if these parties together are not able to gain a majority of seats in parliament. A coalition between two major parties is, however, always a theoretical option. It is up to the respective party elites whether such a coalition is formed. Major parties rather try to form 'minimum winning coalitions' (Riker 1962) instead.

Nevertheless, there is no reasonable strategy for supporters of a coalition between two major parties to best influence the outcome of the election. Neither casting a straight ticket for either of the parties nor splitting the ticket between these parties will enhance the chances of getting such a coalition into government. In mixed electoral systems with a two-ballot system, only two-party coalitions between a major and a small party can motivate voters to split their ticket strategically. What *kind* of strategies do voters employ?

In the plurality tier, the mechanism behind strategic voting is the well-known Duvergerian logic to avoid wasting a vote on an uncompetitive candidate (Cox 1997; Duverger 1954; Shively 1970). Figure 1 summarizes this strategic ticket splitting pattern as a result of a strategic candidate vote. Strategic candidate voters are supporters of a small party. Because of the plurality rule used to transform candidate votes into seats, they expect that 'their' local party representative has no chance of winning the district race. Thus to avoid wasting their candidate vote, these voters strategically split their ticket most effectively in the following way: they cast a strategic candidate vote for the most viable major party representative of their preferred coalition and a sincere list vote for their party.<sup>3</sup>

Small-party supporters only cast a strategic vote for a candidate of a less preferred party if the expected utility from having this candidate elected to parliament is higher than the expected utility if the candidate of their most preferred party is elected. Particularly in close races, small-party supporters should be more inclined to avoid wasting their candidate votes because they

more likely expect to make a difference in competitive rather than in a non-competitive district races. Hence, the expected utility for small-party supporters to actually cast a strategic candidate vote depends on the closeness of the district race. Thus, small-party supporters should be more inclined to cast a strategic candidate vote the closer the district race is expected. Thus my first hypothesis is as follows.

*Hypothesis 1 (Wasted Vote):* The closer the district race, the more likely small-party supporters are to follow the wasted-vote strategy and cast a strategic candidate vote.

The PR tier of a mixed-electoral system, however, offers another rationale for voting strategically. Contrary to the plurality tier, strategic list voters in the PR tier can be found among supporters of major parties. If their most preferred coalition has a junior partner who is in danger of falling below the national threshold of representation, they might be motivated to employ a coalition insurance strategy. As can be seen in Figure 1, these voters strategically split their ticket the following way: they cast a sincere candidate vote for the party representative of their preferred party and a strategic list vote for the junior coalition partner of their most preferred viable coalition to ensure that it will overcome the threshold and, thus, that their most preferred party is leading the coalition. If the junior partner fails to overcome that threshold, the senior partner alone might not play a leading role in the prospective government.

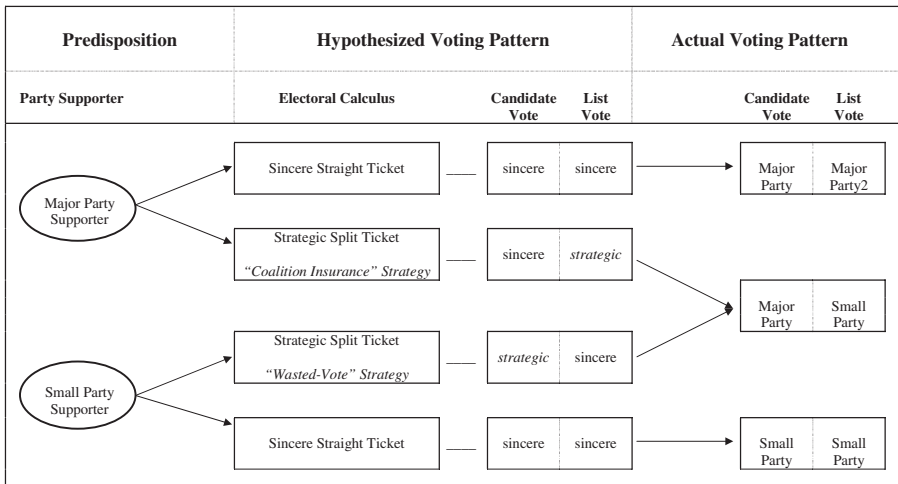


Figure 1. Strategic and sincere voting pattern.

What are the mechanics behind a coalition insurance strategy in the PR tier? List-vote shares are aggregated at the national level. The competitiveness of the district race should therefore have no influence on voters employing the coalition insurance strategy on the list vote. Major party supporters only cast a strategic list vote if the expected utility of ensuring representation of the smaller coalition partner is higher than simply casting a straight ticket for their most preferred party. The expected utility of casting a list vote to support the junior coalition partner could be in fact higher if it increases the chances to get one's most preferred viable coalition into government.

If major party supporters expect that the smaller coalition partner will not be represented in parliament, they would rather cast a sincere straight ticket. Likewise, if major party supporters are absolutely certain that the smaller coalition partner will overcome the national threshold, the incentive to cast a strategic list vote should also rapidly disappear. These voters are likely to cast a straight ticket as well. A strategic list vote is most likely if major party supporters are unsure whether the small coalition partner can overcome the threshold of representation. Thus, in general, the expected utility of casting a strategic list vote should be curvilinear and highest if voters expect to be pivotal – that is, if they expect that their vote is essential for the small coalition partner to garner just enough list votes to make it above the threshold. The incentives to follow the coalition insurance strategy are lowest either if voters are certain that the small party will make it or if voters are certain that the small party will not make it above the threshold of representation. Campaigns of the smaller coalition partners allude to the options of casting a strategic list vote (Roberts 1988). Although this logic is acknowledged in the literature (e.g., Blais & Massicotte 1996; Cox 1997; Pappi & Thurner 2002), scholars have so far failed to provide more than anecdotal evidence that major party supporters systematically desert their party on the list vote in favor of the respective small coalition partner. This seems quite puzzling.

I offer a solution to that puzzle, though. Following the coalition insurance strategy and casting a strategic list vote implies for major party supporters that they have to desert their party on the list vote. This desertion is costly because it effectively reduces the seat share of their most preferred party in parliament. These costs presumably vary across voters. Take, for instance, a major party supporter who much prefers one party to all other parties. I expect such a voter to be less likely to desert their party no matter how strong the strategic incentive in a particular situation might be. Independently of all strategic considerations, such voters already have a low tendency to desert their most preferred party. Now, take a major party supporter who prefers the junior coalition partner only slightly less. Again, independently of what particular expectations this voter has formed about the likelihood that the junior

coalition partner is able to overcome the threshold of representation, a desertion of his or her most preferred party is *a priori* less costly. Thus, I expect the logic of the coalition insurance strategy to be more pervasive, if three conditions hold. First, the voter must most prefer a major party. Second, he or she has to be uncertain whether their respective small coalition partner will be represented in parliament. Third, the voter needs to have a high enough tendency to desert his or her most preferred party. Hence, the second hypothesis is as follows:

*Hypothesis 2 (Coalition Insurance):* If major party supporters are unsure about the expectations whether or not the smaller coalition partner will be represented in parliament and the higher their tendency to desert their most preferred party, the more likely they are to follow the coalition insurance strategy and cast a strategic list vote.

The first two hypotheses deal with the influence of electoral rules on how voters behave at the polls. Although electoral institutions provide incentives to vote strategically, these incentives vary in their impact on voters' decision-making process. I propose that a voter's *proclivity* to vote strategically determines the degree to which these incentives are systematically anticipated in their decision calculus.

### *The proclivity for strategic voting*

Typically the literature lumps together all ticket-splitters into one group (Burden & Kimball 1998; Fiorina 1992). Scholars often focus solely on the attitudinal and demographic differences between ticket-splitters and straight-ticket voters (Beck et al. 1992; Campbell & Miller 1957). This is certainly an oversimplification of the ticket-splitting phenomenon. There might be a variety of reasons why voters split their tickets (Pappi & Thurner 2002: 210–211). I do not expect ticket-splitters to be a homogeneous group. Instead, my goal is to disentangle this category into two constituent groups: strategic ticket-splitters employing one of two strategies, and all other remaining ticket-splitters.

Voting behavior, as every type of behavior, is not only situationally, but also dispositionally determined. The prerequisites for strategic voting are that a voter understands the strategic rationales and that he or she is able and motivated to employ them. Given these constraints, voters should vary widely in their *proclivity* to vote strategically. This proclivity depends on at least two factors: the *motivation* to cast a strategic vote and the *capability* to understand

the strategic implications of the electoral rules when it comes down to cast a vote for one party or another. Surprisingly, all studies about strategic voting are built on a rather different and unrealistic understanding of the strategic *homo politicus*. The underlying assumption in this literature is that, given certain institutional constraints, all voters seem to have the same *proclivity* to act strategically.

If voters vary in their *proclivity* to act strategically, some should possess a higher intrinsic motivation to engage in an effortful decision calculus than others. Since splitting a ticket requires presumably a higher elaboration than simply casting a straight ticket (Gschwend 2004), I expect such voters to have a higher *proclivity* for casting a strategic vote. From the political behavior literature, we know more about the motivational differences that anchor voters. The standard finding is that voters who split their ticket have weaker partisan attachments than straight-ticket voters (Beck et al. 1992; Karp et al. 2002; Nie et al. 1976). Thus, the third hypothesis is as follows.

*Hypothesis 3 (Motivation):* The weaker voters' partisanship, the stronger they are motivated to split their ticket.

As well as motivation, the remaining factor that determines voters' *proclivity* to vote strategically is their capability to understand the implications of their choices. Voters with high levels of political sophistication are capable to comprehend various options that the electoral rules offer them (Duch & Palmer 2002; Zaller 1992). Thus, my fourth hypothesis is as follows.

*Hypothesis 4 (Capability):* The higher voters' level of political sophistication, the more likely they are to cast a strategic vote.

To sum up, I developed two sets of hypotheses. The first set of hypotheses introduces two different strategies and lays out the conditions under which voters might follow them. My general argument is that there is more to strategic voting than simply avoiding wasting one's vote. Contrary to the findings about voting behavior in plurality systems, the coalition insurance hypothesis implies that in electoral systems with a PR tier even small parties might be the beneficiaries of strategic voting. The second set of hypotheses lays out two further individual characteristics that define a voter's *proclivity* to vote strategically. My general argument here is that incentives provided by electoral institutions vary in their impact on voters' decision-making process. Contrary to the 'common wisdom' in the strategic voting literature, voters respond differently to the same institutional incentives.



*Case selection: The German context*

In order to test these hypotheses, a mixed electoral system with two ballots offers the opportunity to study the impact of electoral rules while controlling for various personal factors. Focusing on one election in one country also has an advantage over pooling data from various elections or electoral systems because the potential influence of intervening variables such as social cleavages, political culture, generalized issue dimensions and the party system can be largely controlled given that the elections were held at the same time in the same country. Because of its 50-year tradition of applying mixed electoral rules in national elections, I expect that the German electorate has gained sufficient experience with this rather complicated electoral system. Thus, one would expect that whatever strategies voters can use in such systems, they are likely to be crystallized – and observable – within the voting patterns of recent German elections.

The electoral rules in Germany include a single-member district tier, where only the candidate who garners a plurality of the candidate votes wins. The PR tier offers even small party lists a chance to gain representation in parliament if they get more than 5 per cent of all list votes nationally. List votes are aggregated on the national level and determine the party seat shares in parliament. Germany is, therefore, considered a compensatory mixed system because – through a seat linkage – the PR tier does compensate the disproportionality of the plurality tier (Shugart & Wattenberg 2001).

The 1998 election is particular good case to look at because two coalitions between a major party and a small party, respectively, were clearly identifiable for the voters before the election. The party system at that time consisted of two major parties – the Social Democratic Party of Germany (SPD) and the Christian Democratic Union (CDU)/Christian Social Union (CSU)<sup>4</sup> – each getting about 40 per cent of the list votes, and three small parties – the Free Democratic Party (FDP), the Party of Democratic Socialism (PDS) and the Greens – each garnering just over 5 per cent of the list votes. CDU and FDP were the ‘incumbent coalition’ before the 1998 election for sixteen years. The parliamentary opposition that tried to challenge the CDU/FDP coalition was comprised of the SPD and the Greens.<sup>5</sup> Therefore, following the logic described in Figure 1, FDP or Green supporters acting strategically are expected to cast strategic candidate votes, while CDU and SPD supporters acting strategically are expected to cast strategic list votes.

How well does the described micro logic of strategic voting hold up under other mixed electoral systems? Mixed electoral systems provide voters with a particular strategic environment because they combine majoritarian and PR principles. While in compensatory mixed systems, majoritarian and PR seat

allocation systems are linked in order to let the latter compensate for the disproportionality of the former, in non-compensatory (also known as parallel) mixed systems, there is no such seat linkage (Shugart & Wattenberg 2001).

The micro logic laid out above addresses two types of strategic voting that pertain to the ballot structure and to fundamental incentives inherent in plurality and PR seat allocation rules. On the one hand, the incentive to avoid wasting one's candidate vote on a hopeless candidate is generally present in the plurality tier of mixed electoral systems, whether there is a seat linkage or not.<sup>6</sup> It has been argued, however, that the perceived costs of a strategic candidate vote is lower in compensatory than in non-compensatory systems because a candidate vote is less important to the outcome of the election. A strategic candidate vote of a small party supporter in the compensatory mixed system of Germany does not harm the party's seat share in parliament (Pappi & Thurner 2002: 213). If this assumption holds true, then one should be able to observe more strategic candidate votes in compensatory than in non-compensatory mixed systems holding everything else constant.

On the other hand, the incentive for large party supporters to insure representation of the junior coalition partner is present in the PR tier of mixed electoral systems, again, whether there is a seat linkage or not. One could argue that in non-compensatory mixed systems there is considerably more uncertainty about how many seats parties in parliament will get because the outcome of the SMD races are consequential for the overall seat shares but harder to predict. If this assumption holds true, then one should be able to observe more strategic list votes to insure representation of the junior partner in compensatory than in non-compensatory mixed systems holding everything else constant.<sup>7</sup>

To sum up, while the frequency that the wasted vote strategy for the candidate vote as well as the coalition insurance strategy for the list vote can be observed likely depend on the existence of a seat linkage that distinguishes compensatory from non-compensatory mixed systems, the incentives for those strategies do not. Thus, both strategies will be potentially employed across a wide range of two-ballot mixed systems. Depending on the context of a particular election or other institutional features – for example, a formateur rule or balancing motives (Cox 1997: 194–197) – there might be other strategies in addition to the micro logic I laid out above. First, because these strategies are more context dependent, they are therefore less comparable across electoral systems. Second, the existence of these additional features neither diminishing the systematic incentives for the wasted vote strategy nor the coalition insurance strategy in two-ballot mixed electoral systems.<sup>8</sup> The micro logic about the types of strategic voting I am focusing on in the German case is consequently comparable across a wide range of mixed electoral systems.

## Data, analysis and results

There are many possibilities of how voters split their tickets. The 1998 German NES pre-election study on which this analysis is based was conducted in the last four weeks prior to the election and has two vote-intention items for candidate and list vote, respectively.<sup>9</sup> Because I am interested in explaining why some voters cast a strategic vote as opposed to a straight ticket, or whether they split their tickets in a non-strategic fashion, my dependent variable has three categories: respondents casting a straight ticket; those who split their ticket strategically (i.e., those who intend to cast a candidate vote for the CDU and a list vote for the FDP or a candidate vote for the SPD and a list vote for the Greens, respectively); and those who split their ticket any other (non-strategic) way.<sup>10</sup> There might be factors that cause a type of voting behavior that is observationally equivalent to a strategic split-ticket pattern but actually is neither caused by a wasted-vote nor a coalition insurance strategy. These factors are likely to be idiosyncratic and are, therefore, uncorrelated with the factors that are expected to tap preferences and expectations that predict a strategic vote.<sup>11</sup>

Since the categories of the dependent variable are unordered I will estimate a multinomial logit model (MNL) to test my hypotheses simultaneously.<sup>12</sup> The *Wasted Vote Hypothesis* addresses the strategy at play for the candidate vote. If small-party supporter expects a competitive race, they should be more likely to cast a strategic candidate vote. This implies a hypothesized interaction effect of being a small-party supporter and the competitiveness of the district race. I include a dummy for small-party supporters ('PID small party') scoring one if voters identify with either the FDP or the Greens. The 'Competitiveness' of the electoral district is usually measured by the (candidate) vote margin between the top two contenders (Black 1978, 1980; Cain 1978). After identifying each respondent's electoral district, I merged the actual margin derived from official district-level vote returns to the German NES. It is reasonable to assume a nonlinear relationship between the district margin and the likelihood of voting strategically because an additional increase of an already expected large margin should provide less extra incentives for small-party supporters to avoid wasting their candidate vote than in highly competitive races.<sup>13</sup> My prediction is that the more competitive the district race is expected (i.e., the smaller the squared root of the district margin), the higher the incentive for small-party supporters to avoid wasting their candidate vote on an uncompetitive candidate. Thus, evidence for this hypothesis would be a negative coefficient of the interaction effect between 'PID small party' and 'Competitiveness' for the choice between casting a strategic vote as opposed to a straight ticket.

In order to test the *Coalition Insurance Hypothesis* and to provide more than anecdotal evidence for this strategy on the list vote, I will construct two three-way interactions in the following way. One has to assess the influence of voters' expectations about the success of the small coalition partner, either the FDP or the Greens, for supporters of the respective major coalition partner, depending on the costs they have to bear deserting their most preferred party at the polls. In the pre-election study of the 1998 German NES, respondents were asked about their subjective expectations whether the FDP or the Greens would get 5 per cent of the list votes. The answer categories run from 'absolutely certain that the party will exceed' the national threshold of 5 per cent to 'absolutely certain that the party will not'. Two middle categories are comprised of respondents who are neither completely certain nor completely uncertain. Since the likelihood of a strategic list vote should be highest if voters are unsure whether the small coalition partner can overcome the national threshold, the likelihood of casting a strategic list vote should be curvilinear and highest if voters are at the theoretical middle position between both extremes. I therefore construct separate dummy variables for expectations about the success of the FDP and the Greens to overcome the 5 per cent threshold by collapsing both middle categories. Thus both expectation dummies ('Expectation FDP', 'Expectation Green') score one if respondents are neither completely certain nor completely uncertain that the party will make it and zero otherwise. The expectations about the FDP should only be relevant for CDU supporters ('PID CDU') (i.e., for those who identify themselves with the CDU) and, likewise, expectations about the success of the Greens should only make a difference for those who identify with the SPD ('PID SPD').

The *Coalition Insurance Hypothesis* also points out that for a CDU (or SPD) supporter, the influence of their expectation that the FDP (the Greens) will overcome the threshold should be moderated by the costs they have to bear casting such a strategic vote. I will measure these costs by the absolute difference between the two most preferred parties on the likes/dislikes-scale ('Cost of strategic voting'). In general, the smaller this difference, the easier it is to desert someone's most preferred party on the list vote. I will transform this difference in the following way to ease interpretation of both three-way interactions. The ratio  $1/(\text{absolute difference} + 1)$  defines a desertion score. Higher scores indicate a stronger tendency to desert someone's most preferred party.

Suppose respondents whose two most preferred parties are tied. The absolute difference between the two most preferred parties is at its minimum (= 0), and hence the variable 'Cost of strategic voting' is at its maximum (= 1). Now suppose respondents whose two most preferred parties score at

10 and 0, respectively, on the party likes/dislikes-scale. The respective value of ‘Cost of strategic voting’ to desert their most preferred party will be 1/11. Such respondents clearly have a lower tendency to desert their most preferred party, no matter their expectations about the success of the FDP and the Greens to gain representation. Even in the most favorable case, where, say, a CDU supporter is unsure whether the FDP is able to overcome the national threshold, if he or she scores low on the variable ‘Cost of strategic voting’ one hardly expects them to follow the coalition insurance strategy. Strategic voting is simply too costly for this voter. All composite terms are coded such that higher scores indicate a higher likelihood of casting a strategic list vote.

To sum up, respondents with high values on all three composite terms fit the causal process laid out in Figure 1 by the coalition insurance strategy and, hence, are predicted to cast a strategic list vote as opposed to respondents that score low on one of these terms. Note that respondents may get a product score of zero if they do not identify with one of the major parties or if they are either completely certain that the party will make it or completely certain that the party will not make it. Thus, evidence for this hypothesis would be a positive coefficient for both three-way interactions for the choice between casting a strategic vote as opposed to a straight ticket.

Furthermore I developed a *Motivation Hypothesis*. If voters are strong partisans they might be less motivated to split their ticket. Such voters presumably have a lower proclivity to think and vote strategically. Respondents of the German NES have to rate the strength of their partisan attachment as weak (= 1), moderate (= 2) or strong (= 3). Respondents without any partisan identification or people who refuse to report it are recoded as 0. Finally, I recode the ‘Strength of Partisanship’ variable to range from 0 to 1 in order to facilitate comparison of the estimated coefficients. My expectation is that the stronger voters’ partisanship the more motivated they will be to cast a sincere straight ticket for their most preferred party. Thus, I expect a negative coefficient in the first set of estimates.

The *proclivity* to vote strategically depends also on a voter’s capability to comprehend various options that the electoral rules offer them. I expect that the level of a respondent’s political sophistication should reflect a voter’s capability to use these rules most effectively. I prefer factual knowledge questions about politics in order to construct a political sophistication scale. Like Zaller (1992), I rely on the ability to locate the main political parties ‘correctly’ on a left-right scale. In order to get a score of 1 for a ‘correct’ answer, respondents must place parties on the left-right scale in a meaningful way. Placements are only assessed relative to one another, for instance, whether one party is located to the right of another party. Respondents who either get a location

test item wrong, as well as those who have missing values because they did not place a particular party, score a 0 on this item.<sup>14</sup> All nine scores are summed, and then divided by the total number of items. Thus my sophistication scale also ranges from 0 to 1. I expect that political sophistication should facilitate strategic considerations, and hence strategic voting. The coefficient of the variable ‘Political Sophistication’ should be positive for the probability of casting a strategic vote versus the baseline of casting a straight ticket.

In addition I also include a control variable (a ‘West’ dummy) to control for the fact that the micro logic of strategic voting operates potentially on different levels in the two regions of the country. Familiarity with the party system and experience with the electoral system does facilitate strategic voting (Moser & Scheiner 2005). Consequently, one would expect more strategic voting and less non-strategic ticket splitting rather than casting a straight-ticket in West than East Germany. Therefore the coefficient of ‘West’ should be negative in the first set and positive in the second set of estimates. Table 1 presents the estimation results of this three-choice model.

Overall, the model fit is pretty good. This model classifies about four-fifth of all respondents correctly.<sup>15</sup> Assessing all hypotheses simultaneously requires tests of particular two- and three-way interactions. In order to do that one has to include many lower-order coefficients in the model despite interpreting them individually (Braumoeller 2004; Brambor et al. 2006). All interesting coefficients are set in bold. The estimation results provide strong evidence for the *wasted-vote hypothesis* as the negative coefficient in the second set of estimates indicates. Small-party supporters are more likely to split their ticket strategically and cast a strategic candidate vote for the candidate of their major party coalition partner rather than casting a straight-ticket, the more competitive the district race is expected to be. To ease the interpretation of this two-way interaction, Figure 2 presents predicted probabilities, along with their 95 per cent confidence intervals, of a small-party supporter casting a strategic (candidate) vote in the Western part of the country. All other variables are set to their mean.

As hypothesized, the influence of the expected competitiveness of the district race is strongest in close races. The probability of an otherwise average small-party supporter casting a strategic candidate vote more than doubles in districts where the top two contenders are expected to be very close as opposed to a district with a large district margin. In fact the wasted-vote strategy appears to be very influential for small party supporters. The figure illustrates that the estimated effect is large enough that two otherwise average small-party supporters are predicted to behave differently depending only on the expected competitiveness of the district in which they live. The model predicts them casting a strategic candidate vote in a very com-

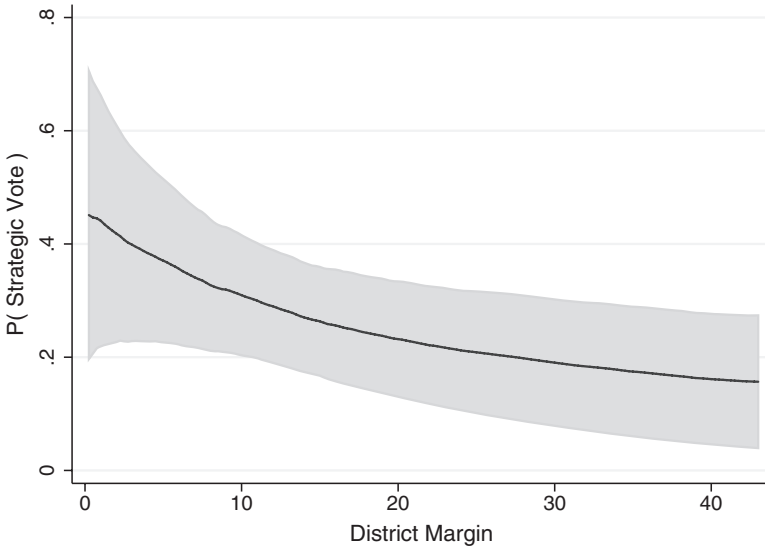
petitive district race (i.e., with a district margin of less than 2 percentage points) as opposed to a straight-ticket otherwise. Thus, the expected closeness of the district race matters substantively to the decision calculus of small-party supporters.

Going back to the MNL estimation results in Table 1, the *Coalition Insurance Hypothesis* predicts a positive sign for the coefficient of both

Table 1. Disentangling straight-ticket from strategic and non-strategic ticket-splitting

| Independent variables                                  | Dependent variable                  |                                   |
|--|-------------------------------------|-----------------------------------|
|  | Ticket-splitting v. straight-ticket | Strategic vote v. straight-ticket |
| Competitiveness  | -0.161(0.090)                       | 0.188(0.125)                      |
| PID small party  | 2.032*(0.977)                       | 4.464**(0.887)                    |
| PID small party × Competitiveness                      | -0.363(0.292)                       | <b>-0.575** (0.186)</b>           |
| Cost of strategic voting                               | 0.872(1.272)                        | -0.075(1.291)                     |
| PID CDU  | -1.183(1.204)                       | 0.437(1.411)                      |
| Expectation FDP  | -1.141(0.673)                       | -1.192(0.804)                     |
| PID CDU × Expectation FDP                              | 1.986(1.261)                        | -1.158(1.528)                     |
| PID CDU × Cost of strategic voting                     | 3.272(1.947)                        | -2.634(1.510)                     |
| Cost of strategic voting × Expectation FDP             | 1.915(1.189)                        | 0.991(1.240)                      |
| PID CDU × Cost of strategic voting × Expectation FDP   | -3.738(2.143)                       | <b>5.133** (1.771)</b>            |
| PID SPD  | -1.626(1.355)                       | -1.900(1.919)                     |
| Expectation Green                                      | 0.182(0.571)                        | -0.095(0.698)                     |
| PID SPD × Expectation Green                            | 2.067(1.375)                        | 1.322(1.917)                      |
| PID SPD × Cost of strategic voting                     | 1.919(1.603)                        | 3.530(2.041)                      |
| Cost of strategic voting × Expectation Green           | -0.964(0.881)                       | 0.406(1.115)                      |
| PID SPD × Cost of strategic voting × Expectation Green | -1.943(1.771)                       | <b>-1.563(2.398)</b>              |
| Strength of Partisanship                               | <b>-1.616** (0.494)</b>             | -1.008(0.790)                     |
| Political Sophistication                               | -0.094(0.185)                       | <b>0.522*(0.254)</b>              |
| West   | <b>-0.435(0.241)</b>                | <b>1.057(0.544)</b>               |
| Constant   | -0.856(0.771)                       | -3.940**(1.028)                   |
| N  | 1,095                               |                                   |
| Percentage correctly classified                        | 82.1                                |                                   |

Note: Cell entries are estimated coefficients with their standard errors in parentheses; \* p < 0.05, \*\* p < 0.01 (two-tailed).



*Figure 2.* Simulated impact of district competitiveness on the probability of casting a strategic candidate vote (The horizontal axis indicates the competitiveness of the district race. The shaded region represents the 95 per cent confidence intervals around the simulated predicted probabilities of casting a strategic candidate vote).

three-way-interactions. There is strong evidence that CDU supporters cast a strategic list vote in favor of the FDP, their junior coalition partner. Casting such a strategic vote instead of a straight ticket is all the more likely the lower the costs (i.e., the higher one's 'Cost of strategic voting' score), given that CDU supporters are unsure whether the FDP will gain seats in parliament.

Figure 3 represents the predicted probabilities along with their 95 per cent confidence intervals of a strategic vote for supporters of the CDU who have their party and the junior coalition partner, the FDP, tied on first preference. Apparently, the expectation whether the small coalition partner will be represented in parliament makes a difference for voters who do not bear high costs from deserting their most preferred party associated with the coalition insurance strategy. Including the costs of strategic voting is warranted in order to provide more than anecdotal evidence that major party supporters strategically desert their party on the list vote. If these costs rise, however, the impact of expectations on a voter's decision-making process drops rather quickly. Nevertheless, the coalition insurance strategy shows that there are reasons to desert large parties strategically. This provides stark contrast to the conventional wisdom that strategic voting always reduces the



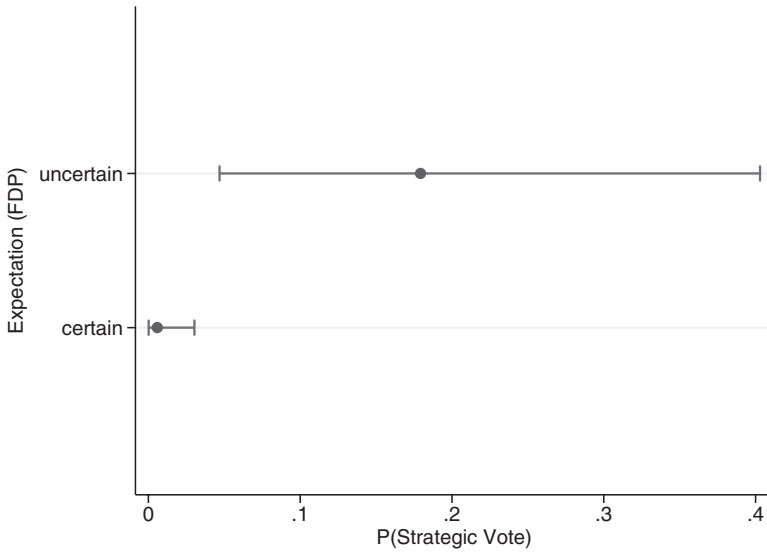


Figure 3. Simulated impact of expectations on the probability of casting a strategic list vote.

fragmentation of party systems. This is not the case. Interestingly, there is only evidence of strategic voting in favor of the FDP. Both parties, CDU and FDP, have been the incumbent government of this election. It appears that the pre-electoral identifiability (Powell 2000; Gschwend 2004) of incumbent coalitions is higher than for other prospective coalitions in the opposition, such as between SPD and the Greens, and, thus, might facilitate strategic coordination of their supporters.

Do people vary in their proclivity to vote strategically even when facing the same incentives? In support of the *Motivation Hypothesis* the respective coefficient in the first set of estimates is negative and highly significant indicating that strong partisans are indeed about five times ( $= 1/\exp(-1.616)$ ) more likely than non-partisans to cast a straight ticket than split their ticket non-strategically. Finally, the *Capability Hypothesis* is also supported by the data. Political sophisticates are about 1.7 times ( $= \exp(0.522)$ ) more likely than political novices to react strategically to the incentives that are provided by the electoral system rather than cast a straight ticket.

To sum up, there is more to strategic voting than simply avoiding wasting one's vote if one liberates oneself from the corset of studying voting behavior in plurality systems. Mixed electoral systems do provide different voters with various incentives to cast a strategic vote. Moreover, some voters are more likely to cast a strategic vote than others even when they are facing the same

incentives. The evidence of *Motivation* and *Capability Hypothesis* make transparent the fact that an individual's proclivity to vote strategically systematically varies across voters.

## Conclusion

Mixed electoral systems provide an ideal institutional context to generate and test theories about the influence of electoral rules on the way people make decisions in the voting booth. This article provides several contributions to the literature on strategic voting, ticket-splitting and electoral systems. Employing a 'within-subject design' offers the possibility of providing different incentives to cast a strategic vote that operate at the same time for the same voter. This notion hinges on the assumption that voters form independent decisions in every tier. Some doubts are in order. For instance, in various electoral systems, the name of a candidate is accompanied with the respective party label on the ballot. This makes personal votes *a priori* less likely. Moreover, explicitly labeling candidates as party representatives might reflect that national party politics not only influences a voter's decision-making process in the PR tier, but also in the plurality tier. The nature of nationalized election campaigns and the importance of coalition governments further undermine the independence assumption. The presence of these contamination effects (Ferrara & Herron 2005; Gschwend et al. 2003; Herron & Nishikawa 2001) might therefore lead scholars to underestimate the degree of strategic voting that has occurred if both tiers were independent.<sup>16</sup> It is thus all the harder to find systematic evidence of strategic voting. Nevertheless, a potential limitation of this study is that the pre-electoral identifiability of prospective coalitions of parties does not vary systematically. So far it is unclear whether this affects the generalizability of the present findings. Further research on the impact of party system characteristics is necessary in order to predict the winners and losers from strategic coordination.

The results of this study indicate, as hypothesized, that particular institutions not only determine the *degree* of strategic voting, but also the *kinds* of strategies voters systematically employ to make their decision. Despite being theoretically important, the latter is something the literature has up to now not systematically examined. Strategic voting has two facets in mixed electoral systems. In the plurality tier, strategic small party supporters employ the *wasted-vote strategy* and cast a strategic candidate vote for a major party candidate. The PR tier, however, offers another rationale for voting strategically. Strategic major party supporters employ a *coalition insurance strategy* and cast strategic list votes for the junior partner of their most preferred

coalition. Following either of these strategies results in observationally equivalent split-ticket patterns: a candidate vote for a major party candidate of a viable coalition and a list vote for the junior coalition partner's party list. Thus, contrary to previous research, strategic votes have a predictable direction. Not only does one predict who is likely to be deserted, but also who gets favored by strategic voting.

Moreover, the implications of strategic voting for the transformation and consolidation process, particularly for newly established democracies, are more pronounced than the current literature (Duch & Palmer 2002) implies. Strategic voting does not automatically facilitate the development of a stable party system because not all strategies favor large parties at the disadvantage of marginal parties. The implication of the coalition insurance strategy is that small parties can also be the beneficiaries of strategic voting. Such behavior will facilitate the fragmentation and destabilization of a party system – something that might be less desirable in newly established democracies.

Finally, this study provides evidence that people vary in their *proclivity* to vote strategically. These findings directly refute the unrealistic assumption in the literature about the strategic *homo politicus* whereby given the same incentives all voters should have the same proclivity to act strategically. These results should also inform the ticket-splitting literature. Ticket-splitters act not necessarily strategically, but some of them do (Gschwend & Van der Kolk 2006). In contrast to the conventional wisdom, this analysis reveals that ticket-splitters differ on several characteristics. They should not simply be collapsed into a single residual category as is typically done. Instead, scholars should disentangle this residual category of voters in order to extract more information from it. An obvious direction for future research is to provide empirical evidence for the distinction of non-strategic ticket-splitters and strategic ticket-splitters across several institutional settings. The *proclivity* to vote strategically does not depend on particular electoral rules. If various strategies are identifiable, tests of the *Motivation* as well as the *Capability Hypothesis* can be obtained easily for voters in other electoral settings.

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## Notes

1. This implies that not every vote for a party other than one's most preferred one (or party candidate) is considered strategic. There are many conceivable reasons why voters deviate from their most preferred party (or candidate) for other than strategic reasons. For instance, voters could deviate in order to voice their protest or signal single issue preferences. Voters might also divide up their votes in two-ballot mixed systems between the parties of their most preferred coalition. In all these instances, voters do not trade their preferences for their expectations in order to maximize their expected utility from voting. They do not deviate from their most preferred party (or party candidate) and cast their votes for a less preferred option just because they expect this to influence the outcome of the election more effectively. Thus, they do not behave strategically.
2. Formal theorists employ a similar argument to make plausible the assumption that voters form 'rational expectations' (Cox 1997; Cox & Shugart 1996; Fey 1997). There is also experimental evidence that the *electoral history heuristic* facilitates generating consistent expectations (Forsythe et al. 1993).
3. Personal votes (Cain et al. 1987) are an alternative explanation given that they are not mere rationalizations of partisan preferences. This requires voters to be able to rank candidates independently of their party preferences. Nevertheless, the mechanism behind this ability is not likely to be correlated with the expectation of the closeness of the district race.
4. I consider the CDU/CSU party cartel as inseparable. In fact, they do not compete in the same districts. The CSU runs candidates only in Bavaria and the CDU everywhere else. For simplicity, I use the CDU notation as shorthand for this party alliance.
5. The Party of Democratic Socialism (PDS), the successor party of the communists in the former GDR, is practically non-existent in West Germany, but very strong in East Germany. The East German party system is still in flux. There are no established coalition patterns involving the PDS as of yet.
6. Moser and Scheiner (2005) show that non-compensatory rather than compensatory mixed electoral systems also provide incentives that facilitate personal votes particularly where prior electoral rules have been more personalistic as SNTV in Japan or SMD in New Zealand. They additionally provide evidence that the German system does not particularly facilitate personal votes (Cain et al. 1987) compared to other mixed electoral systems.
7. Even if there is only a very low (legal or) effective threshold, there will be always the possibility that a large party has to depend on at least an additional seat of a junior coalition partner in order gain a majority in parliament. If this additional seat is easier to gain for the junior than for the large coalition partner (depending on the size of the largest reminders or a quota) then large party supporters will have always an incentive, holding everything else constant, to cast a strategic list vote. The easier it is for voters to realize that, such as in PR systems with high thresholds, the more strategic list votes of this type one should expect, holding everything else constant.
8. A threshold for list vote shares implies always an incentive to avoid wasting one's list vote at the PR tier. Given that the threshold a party has to overcome in mixed electoral systems is relatively low, potential strategic voters following the wasted vote strategy on the list vote cannot be studied systematically with survey data because voters are not asked to rate every party on the ballot. Typically the vote shares of parties one has voters' preferences for are not threatened by such a threshold.

9. The 1998 German NES (ZA-No 3066) can be obtained from the Central Archive for Empirical Social Research, Germany (N = 1,633). A total of 540 observations were dropped from the analysis mostly because respondents had not reported any candidate and list vote.
10. The distribution of the dependent variable is as follows: 82 per cent straight ticket voters, 6 per cent strategic voters and 12 per cent non-strategic ticket-splitters.
11. E.g., small-party supporters might prefer the candidate of the major coalition partner to the candidate of their own party. Thus their voting patterns appear strategically although they split their ticket sincerely. There might be also voters who habitually split their ticket as if they act strategically without trading preferences for expectations – that is, they do not react strategically to the incentives provided by the institutional setting and the nature of the party system.
12. A MNL model yields only consistent estimates if the *independence of irrelevant alternatives* (IIA) assumption holds in the data. Since the probability of casting a straight ticket should theoretically be unchanged if one of the other categories is removed, the IIA assumption should not be violated. Several Hausman tests support this conjecture.
13. Moreover, taking the square root of the actual margin also stabilizes the variances and makes the distribution of these values approximately symmetrical. Some scholars prefer clearly exogenous measures for voter expectations and employ district results of the previous election. Presumably, this is readily available for voters. Other scholars prefer to employ results of the current election. The disadvantage is obvious: how could a voter know the outcome before the election? In response, supporters of using current election data retort that using results from the very same election better approximates pre-election polls in that district than results from the previous election, which usually do not exist in mixed electoral systems. Data from earlier elections might not represent the current situation at all. The closeness of the race or the personality of the candidates might be different from prior elections. Using current results has the added advantage of not assuming that people stayed in the same district since the previous election.
14. The ‘correct’ answers of the 9 ‘location tests’ on a 1 (left) to 11 (right) scale are as follows: CDU to the right of the Greens, DVU to the right of SPD, Republicans to the right of the midpoint (= 6), PDS to the left of DVU, FDP not at the extremes (placed neither 1, 2, 3 nor 9, 10, 11), CDU to the right of SPD, SPD to the right of PDS, FDP to the left of Republicans and CDU to the left of Republicans. The answers conform to a standard spatial representation of political parties in Germany. These nine comparative placement items have an *average inter-item correlation* of 0.33 and the additive sophistication scale has an *alpha reliability* of 0.78.
15. All estimates are accompanied by robust White-Huber standard errors clustered for respondents from the same electoral district to account for the fact that respondents in the same electoral district react not independently to the incentives provided by the electoral rules.
16. One likely consequence of these contamination effects is that more straight-ticket voting is observed (Cox & Schoppa 2002) than otherwise expected. Furthermore, there might be voters who split their tickets ‘seemingly strategically’ between both parties of their preferred coalition. Such a vote is not strategic if voters do not form expectations about the outcome and vote accordingly in order to influence it. Thus, it is necessary for explaining strategic voting to include voters’ expectations about the outcome in our models.

## References

- Austen-Smith, D. & Banks, J. (1988). Elections, coalitions and legislative outcomes. *American Political Science Review* 82 (June): 405–422.
- Beck, P.A., Baum, L., Clausen, A.R. & Smith, Jr., C.E. (1992). Patterns and sources of ticket splitting in subpresidential voting. *American Political Science Review* 86 (December): 916–928.
- Black, J.H. (1978). The multicandidate calculus of voting: Application to Canadian federal elections. *American Journal of Political Science* 22 (August): 609–638.
- Black, J.H. (1980). The probability-choice perspective in voter decision making models. *Public Choice* 35(5): 565–574.
- Blais, A. & Massicotte, L. (1996). Electoral systems. In L. LeDuc, R.G. Niemi & P. Norris (eds), *Comparing democracies: Elections and voting in global perspective*. Thousand Oaks, CA: Sage.
- Brambor, T., Clark, W.R. & Golder, G. (2006). Understanding interaction models: Improving empirical analysis. *Political Analysis* 14 (Winter): 63–82.
- Braumoeller, B.F. (2004). Hypothesis testing and multiplicative interaction terms. *International Organization* 58 (Fall): 807–820.
- Burden, B.C. & Kimball, D.C. (1998). A new approach to the study of ticket splitting. *American Political Science Review* 92 (September): 533–544.
- Cain, B. (1978). Strategic voting in Britain. *American Journal of Political Science* 22 (August): 639–655.
- Cain, B., Ferejohn, J. & Fiorina, M. (1987). *The personal vote: Constituency service and electoral independence*. Cambridge, MA: Harvard University Press.
- Campbell, A. & Miller, W.E. (1957). The motivational basis of straight and split ticket voting. *American Political Science Review* 51 (June): 293–312.
- Cox, G.W. (1997). *Making votes count: Strategic coordination in the world's electoral systems*. Cambridge: Cambridge University Press.
- Cox, G.W. & Shugart, M.S. (1996). Strategic voting under proportional representation. *Journal of Law, Economics and Organization* 12 (October): 299–324.
- Cox, K.E. & Schoppa, L.J. (2002). Interaction effects and mixed member electoral systems: Theory and evidence from Germany, Japan and Italy. *Comparative Political Studies* 35: 1027–1053.
- Duch, R.M. & Palmer, H.D. (2002). Strategic voting in post-communist democracy? *British Journal of Political Science* 32: 63–91.
- Duverger, M. (1954). *Political parties*. New York: Wiley.
- Ferrara, F. & Herron, E.S. (2005). Going it alone? Strategic entry under mixed electoral rules. *American Journal of Political Science* 41(1): 16–31.
- Fey, M. (1997). Stability and coordination in Duverger's Law: A formal model of pre-election polls and strategic voting. *American Political Science Review* 91 (March): 135–147.
- Fiorina, M.P. (1992). *Divided government*. New York: Macmillan.
- Fiske, S.T. & Taylor, S.E. (1991). *Social cognition*. New York: McGraw-Hill.
- Forsythe, R., Myerson, R.B., Rietz, T.A. & Weber, R.J. (1993). An experiment on coordination in multi-candidate elections: The importance of polls and election histories. *Social Choice and Welfare* 10: 223–247.
- Gschwend, T. (2004). *Strategic voting in mixed electoral systems*. Amsterdam: SFG-Elsevier.

- Gschwend, T., Johnston, R. & Pattie, C. (2003). Split-ticket patterns in mixed-member proportional election systems: Estimates and analyses of their spatial variation at the German federal election, 1998. *British Journal of Political Science* 33(1): 109–127.
- Gschwend, T. & Van der Kolk, H. (2006). Split ticket voting in mixed member proportional systems: The hypothetical case of The Netherlands *Acta Politica* 41(2): 163–179.
- Herron, E.S. & Nishikawa, M. (2001). Contamination effects and the number of parties in mixed-superposition electoral systems. *Electoral Studies* 20 (March): 63–86.
- Karp, J.A., Vowles, J., Banducci, S., Donovan, T. (2002). Strategic voting, party activity and candidate effects: Testing explanations for split voting in New Zealand's new mixed system. *Electoral Studies* 12: 1–22.
- Laver, M. & Schofield, N. (1990). *Multiparty government: The politics of coalition in Europe*. Oxford: Oxford University Press.
- Moser, R.G. & Scheiner, E. (2005). Strategic ticket splitting and the personal vote in mixed-member electoral systems. *Legislative Studies Quarterly* 30(2): 259–276.
- Nie, N.H., Verba, S. & Petrocik, J.R. (1976). *The changing American voter*. Cambridge, MA: Harvard University Press.
- Pappi, F.U. & Eckstein, G. (1998). Voters' party preferences in multiparty systems and their coalitional and spatial implications: Germany after unification. *Public Choice* 97 (December): 229–255.
- Pappi, F.U. & Thurner, P.W. (2002). Electoral behavior in a two-vote system: Incentives for ticket splitting in German Bundestag elections. *European Journal of Political Research* 41(2): 207–232.
- Powell, G.B. (2000). *Elections as instruments of democracy: Majoritarian and proportional visions*. New Haven, CT: Yale University Press.
- Riker, W.H. (1962). *The theory of political coalitions*. New Haven, CT: Yale University Press.
- Roberts, G.K. (1988). The 'second-vote' campaign strategy of the West German Free Democratic Party. *European Journal of Political Research* 16: 317–337.
- Shively, W.P. (1970). The elusive psychological factor: A test for the impact of electoral systems on voters' behavior. *Comparative Politics* 3 (October): 115–125.
- Shugart, M.S. & Wattenberg, M.P. (2001). *Mixed member electoral systems: The best of both worlds?* Oxford: Oxford University Press.
- Zaller, J.R. (1992). *The nature and origins of mass opinion*. New York: Cambridge University Press.

*Address for correspondence:* Thomas Gschwend, Mannheimer Zentrum für Europäische Sozialforschung, L7, 1 Mannheim 68161, Germany. E-mail: Thomas.Gschwend@mzes.uni-mannheim.de