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A formal model of party competition with salience

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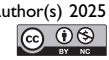

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Abstract

Recent empirical research points at the significance of issue salience for party competition and argues that small parties emphasize secondary issues. This article investigates parties' salience strategies from a formal viewpoint. It presents a model of party competition that allows parties to compete with policy positions on a second dimension, and also to choose an optimal level of issue salience. Equilibrium results are computed based on artificial data. The results identify various relevant factors for policy divergence and emphasis on the second policy issue dimension, notably the structure of public opinion and non-policy related valence differences. The results suggest that it is not only challenger parties at the fringe, but also valence-advantaged parties that seek to push the salience of secondary policy issues.

Keywords

Issue salience; party competition; spatial model

1. Introduction

There is a growing body of empirical literature that studies party competition not (only) in terms of optimal policy positions, but in terms of selective issue emphasis (Basu, 2020; Feld et al., 2014). Recent research by Adams et al. (2024) and Vasilopoulou and Zur (2024) shows that issue salience plays a significant role in party competition by affecting parties' vote shares presumably to a larger extent than positional changes. The idea that parties compete by making new or secondary policy issues more important in an election traces back to Riker's 1982 work on heresthetics. It builds on the formal result that there

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is no stable equilibrium for majority voting in multidimensional spaces (Arrow, 1951; Plott, 1967). Consequently, current losers always have an incentive to span a second dimension to overrule the current coalition. A similar argument is formulated in the seminal salience theory (Budge and Farlie, 1983) and issue ownership theory (Petrocik, 1996), both of which have stimulated research that investigates issue emphasis and salience strategies of parties (Bé langer and Meguid, 2008; Budge et al., 2001).

The empirical results within this strand of literature are mixed, however, when it comes to the question of who pushes the salience of secondary (niche) policy issues. While some works suggest that political competition is characterized by issue convergence (Sigelman and Buell, 2004), such that parties take up the topics on which their rivals campaign, others report that salience strategies differ over parties and issues (Kristensen et al., 2022; Wagner and Meyer, 2014). The empirical literature on party competition in West European party systems has repeatedly reported that small and extreme parties put significantly more emphasis on secondary policy issues (De Vries and Hobolt, 2020; Hobolt and De Vries, 2015; Wagner, 2012b). This pattern aligns with theoretical findings by Adams et al. (2024) and Vasilopoulou and Zur (2024), demonstrating that heightened salience of secondary issues benefits smaller parties. The contribution by Feld et al. (2014), however, points at non-monotonic relations between issue salience and electoral gains, showcasing the complexities of modeling competition over salience.

I analyze issue salience strategies from a formal perspective, building on prior research that models competition over salience (Adams et al., 2024), but advancing the field by jointly modeling competition over both policy *and* salience. To achieve this, I develop a proximity model of political competition (Downs, 1957) within a two-dimensional policy space, where parties aim to maximize votes by optimizing their positions on the new dimension and by strategically influencing issue salience. Parties seek to maximize votes. The model also considers non-policy related valence advantages of parties (Groseclose, 2001), such that major parties attract voters who are located even further away. Since the complexity of the model makes an analytic solution hard to track, I use computational methods on artificial data to find equilibrium solutions from which I derive comparative statics.

The purpose of the model is to analyze party behavior in a situation where a new or formerly un-politicized policy issue dimension becomes relevant to voters for external reasons. Where will parties locate on the new dimension, and which parties have an incentive to make the secondary policy dimension more salient? I will draw on a two-dimensional model of party competition to answer these questions. The first dimension reflects the main cleavage that describes the party configuration, that is, an ideological dimension. The second dimension could be any new issue that gains importance among the electorate for exogenous reasons, such as the re-emergence of immigration issues as a salient line of conflict in many West European policy spaces over the course of the last two decades (Dennison, 2020), or the emergence of a new policy issue dimension evolving around matters of climate change mitigation. On immigration matters, we observe policy divergence with radical right parties emphasizing these issues and competing with extreme standpoints, being starkly opposed by left and green parties on the other side. We can observe similar scenarios for the issue of European integration that was pushed by Euroskeptic parties in the UK and other countries De Vries and Hobolt (2012). On climate change issues, we observe green parties as strongest proponents of

climate friendly policies, while at least in some European countries radical right parties take opposing stances by denying the existence of man made climate change. While the pattern of policy divergence on the newly emerging policy issue is closely connected to parties' ideological positions, the pattern of issue emphasis is less clear.

I randomize the model's parameters to obtain general results on how key characteristics of parties and party systems affect equilibrium positions and salience. These parameters are (1) parties' positions on the primary/ideological dimension, (2) parties' valence attributes, (3) the number of parties in the system, as well as (4) the level of covariance of voters' preferences on the ideological and new policy issue dimension. The results show that, overall, a party's position on the first dimension is a strong predictor for its equilibrium position on the second policy issue, leading to equilibrium configurations close to the principal axis of the policy space. The location of that axis depends on the covariance of the electorate. The more aligned voters' preferences are on both dimensions, the steeper the angle of the axis. The results on policy divergence further confirm existing results in that low valence parties take more extreme position on the second policy issue dimension in equilibrium, while high valence parties take moderate positions. Incentives for policy divergence are larger the more parties compete. In terms of salience, the results support the empirical literature in that extreme, that is, pole parties put more emphasis on the new policy issue than moderate parties. However, there is also a significant relation between party valence and salience: high valence parties have larger incentives to push the salience of the second policy issue dimension than low valence parties. This is a novel insight. These results advance our understandings of party competition for issue salience and add a theoretical basis to our understanding of the structure of West European party systems.

The article is structured as follows. The next section reviews the existing literature on parties' selective issue emphasis. The fourth section describes the theoretical model and its key assumptions. The fifth section discusses the model specifications and the simulation algorithm developed to detect Nash equilibria. The following section shows the results of 2000 equilibrium searches on artificial data. The last section concludes.

2. Selective issue emphasis as party strategy

Parties' competition for policy issue positions and strategic issue emphasis have long been discussed in two separate strands of literature. On the one side, there is the literature that analyses parties' positional strategies either in formal terms (Groseclose, 2001; McKelvey and Patty, 2006; Schofield, 2004), or from an empirical perspective (Adams et al., 2004; Clark, 2009; Pardos-Prado, 2012), or by combining formal with empirical approaches (Adams et al., 2005). This literature has so far attested that non-policy related attributes of parties play an important role in determining their positional incentives: while parties that enjoy electoral advantages based on valence or partisan attachments are incentivized to locate at moderate positions, parties that are disadvantaged on non-policy grounds find vote-maximizing positions at more extreme positions of the policy scale. Besides that, district magnitude, the number of parties in the system and the proportionality of the electoral formula have also been identified as drivers of policy convergence (Cox, 1990).

Issue salience has been discussed in a separate literature strand, mainly building on the contributions on heresethetics by Riker (1982), and on issue evolution by Carmines and Stimson (1989). Both theories argue that politicians/parties will bring up new issues with the intend to transform the political space to their advantage. Against the background of the chaos theorem, issue salience is thus regarded as a powerful strategy in politicians' toolkit to maximize their votes. Research by Feld et al. (2014) and Kurella and Rapp (2025) show that the relation between issue salience and electoral gains is not necessarily monotonic: whether a party benefits from further increasing the salience of a new policy issue depends on the exact configuration of voter preferences and party locations, as well as from the initial level of salience. While at some initial salience level, a candidate increases their vote share if the salience increases further, it may decline again at some tipping point. Recent empirical research in that vein finds, for example, that far right parties in Europe benefit if the issue of European integration becomes more relevant to voters (Vasilopoulou and Zur, 2024). Adams et al. (2024) analyzed the effect of salience on British elections, revealing that the low-valence center party Liberal Democrats faced strong incentives to emphasize the left-right policy dimension, while the other two major parties would have benefited from decreasing salience levels.

Empirical contributions generally support the notion that parties differ in the extent to which they pursue issue salience strategies. While young, smaller and less resourceful opposition parties are very selective in their issue profile, mainstream parties engage with a broad range of issues simultaneously (Meguid, 2005; Wagner, 2012a). Consequently, new issues are likely introduced and emphasized by small, new, opposition parties, and by parties that have been facing electoral losses in past elections (Basu, 2020; Meyer and Wagner, 2013). By pursuing an issue entrepreneurial strategy in the sense of Riker (1982), these small challenger parties are the drivers of issue evolution (De Vries and Hobolt, 2020; Hobolt and De Vries, 2015; Wagner, 2012b). A key point here is that the new issue is cross-cutting the existing predominant line of conflict, thus effectively splitting the constituency of the established parties. This issue entrepreneurship theory is one of the rare contributions connecting salience with positional theory, by making predictions on the optimal salience and position of the entrepreneurial party on the new issue (in opposition to the remaining parties). Yet the reactions of the remaining parties in terms of salience and position are unclear.

How do other parties react to entrepreneurial strategies by challenger parties? Meguid (2005, 2008) argues that mainstream parties' best response is to either jointly avoid the new issue, or to accommodate the challenger by also engaging with the issue, and taking over the challenger's position. However, this strategy is only assumed to work if the challenger party is still young and has not yet established issue ownership. Avoidance should thus be frequently observed. The empirical literature, however, shows that issue engagement is quite common. Sigelman and Buell (2004) empirically showed that issue convergence is rather the norm than the exception in US presidential campaigns. Analyzing campaign statements from 1960 to 2000, they find no evidence that US presidential candidates talk past to each other, but they overwhelmingly address the same topics, even more so if the race is close. Similar results have been reported for European parties by Green-Pedersen (2007). These findings are supported by the agenda-setting perspective presented by Green-Pedersen and Mortensen (2010): Parties are in constant dialogue,

and may be forced, for example, by the media, to engage with issues that other parties emphasize, even if they would not emphasisze the issue as long as it is not politicized by others. A rationale for which issues parties will engage with is outlined by issue yield theory (De Sio and Weber, 2014). According to that, parties will emphasis issues on which both the party itself as well as their support base is in broad agreement. This again constitutes a link between salience and positional theories by linking a party's issue emphasis to its position. Empirical applications have largely supported the argument by showing that parties take over new issues on which their own voters are not divided (De Sio et al., 2018, 2016; Franzmann et al., 2020).

From that overview of the literature, I deduce several party and party system characteristics that have been identified to influence party competition for policy position and/or salience. On the party level, this is first the position a party inhabits on the dominant line of conflict, respectively on the ideological dimension. Following on Riker (1982), Carmines and Stimson (1986), and De Vries and Hobolt (2020), parties that are located at more extreme positions are more likely bringing up new, secondary policy issues on which they can then take a more advantageous position. Secondly, non-policy related disadvantages play an important role in party competition. This both influences its positional incentives, being pushed to take more extreme positions (Groseclose, 2001). At the same time it has been shown that disadvantaged parties like new, opposition parties or current losers, are more likely to show a niche profile in being more selective in their issue emphasis (Meyer and Wagner, 2013). Valence is therefore likely to influence both a party's optimal policy position, as well as its optimal salience strategy.

Further, the literature on issue evolution points at the role of preference alignment between the primary and the secondary policy issue dimension. Yet, predictions on the direction of the effect vary between issue entrepreneurial and issue yield theory. While the first argues that challenger parties will be more likely to emphasise cross-cutting issues, that is issues which are not aligned with the primary political conflict, issue yield theory argues that parties are more likely to expand on new issues if these are well aligned with the dominant line of conflict. It might well be that mainstream and challenger parties face detrimental incentives regarding the nature of the new issue and its relation to the primary line of conflict. Another factor that seems relevant at the party system level is the size of the party system. The more parties compete, the stronger the need for differentiation, I expect. These are the features that will be considered in the following when outlining the model of party competition.

3. The model

The model of party competition that is used here builds on previous work by Schofield (2005a,b), Lin et al. (1999), and McKelvey and Patty (2006). It is based on voter utility functions that combine policy proximity with a valence term, which captures non-policy related aspects of the vote function like competence and sympathy scores of leaders and parties. The proximity term is flexible to consider competition on multiple policy dimensions. The model assumes that parties are vote maximizing, thus capturing party motivations both in plurality and in proportional electoral systems. Variants of this model have been applied to study the existence and configuration of party policy

equilibria in empirical, multi-dimensional policy spaces in, for example, Great Britain, Israel, the Netherlands, Germany, or Turkey (see, e.g. Kurella and Pappi, 2015; Schofield, 2004; Schofield and Sened, 2005a,2005b, 2006; Schofield et al., 2011a,b).

3.1. Model assumptions

Competition takes place in a two-dimensional policy space, of which the first x-dimension describes the primary line of conflict, that is, the ideological dimension, and the second y-dimension is an (re-)emerging line of conflict that enters the national policy space because of exogenous reasons or as the results of an issue entrepreneurial strategy by one of the parties.

Voters are described by ideal points on both dimensions, such that each voter has a pair of coordinates that describes her preferences as a location in the policy space: $\{x_i, y_i\}$ with $i \in N$. The policy space is an open and convex two-dimensional Euclidean space. Each party j is characterized by its policy offer within that space, $\{x_j, y_j\}$. Voter i's utility is a function of the party's valence attribute λ_j, and the distance between the voter's ideal point and the party's policy offer. It declines monotonically as the policy distance increases. The relative weight with which the policy distance on each dimension influences voter utility is captured by the salience parameter. I define a single salience parameter β such that the decision weight of the first dimension x is given by $(1 - \beta)$ and that of the second dimension, y, is given by β, with $\beta \in (0, 1)$. Voter i's utility is thus given by the following equation:

$$u_{ij}(\mathbf{p}, \mathbf{b}) = \lambda_j - (1 - \beta)(x_i - x_j)^2 - \beta(y_i - p_j)^2 + \epsilon_{ij},$$

where ϵ_{ij} is the error of the model. $\mathbf{p} = (p_1, \ldots, p_J)$ is the vector of party positions on the second dimension y, and b is the vector of parties' salience parameters: $\mathbf{b} = (b_1, \ldots, b_J)$. It is assumed that the overall level of electoral salience of the second dimension, β, is the average over all parties' salience levels:

$$\beta = \frac{1}{J} \sum_{1}^{J} (b_j).$$

The ultimate electoral salience, or voter issue attention, is the product of all parties' collective issue emphasis. Thus, even a small party may increase voter attention to an issue by putting all their emphasis on the issue. As this issue dimension consequently becomes salient for voters, other parties are forced to respond optimally to that issue as well. This reflects the idea that parties are in dialogue with each other, as outlined in the model of agenda setting by Green-Pedersen and Mortensen (2010). The optimal response might still be to de-emphasize the issue, but their optimal position might look different than in the case the issue remains un-politicized by all parties.

Voting is assumed to be probabilistic, such that voters vote for each party with probability proportional to the value of the utility function. Assuming that the error terms of u follow a Type-I generalized extreme value distribution, the voting probability is given by the following equation:

$$\rho_{ij}(\mathbf{p}, \mathbf{b}) = \frac{\exp(u_{ij}(\mathbf{p}, \mathbf{b}))}{\sum_{l=1}^{J} \exp(u_{il}(\mathbf{p}, \mathbf{b}))}$$

A party's expected vote share is given by the following equation:

$$EV_j(\mathbf{p}, \mathbf{b}) = \frac{1}{N} \sum_{i=1}^{n} \rho_{ij}(\mathbf{p}, \mathbf{b})$$

where N is the number of voters. I assume that parties' seek to maximize their vote share, which can be modeled by the maximization of the expected vote share. Their objective function is thus given by the best response function

$$BR_j(\mathbf{p}, \mathbf{b}) = argmax\ \mathbf{p}, \mathbf{b}\ \mathrm{EV_j}(\mathbf{p}, \mathbf{b})$$

The purpose of this model is to show how competition evolves on a secondary issue dimension, given the current pattern of competition on the first dimension. Therefore, parties' positions on the first dimension are fixed, that is, not subject to optimization.[1] This assumption reflects empirical insights showing that parties hardly change their positions on the main line of conflict, probably because of credibility loss on the one side, and voters' non-attention to issue change on the other side (Adams, 2012; Adams et al., 2011). Since the second dimension describes a new or formerly secondary issue dimension, parties are assumed to have much more leeway in choosing and changing their policy offer on that dimension, as compared to the established main line of conflict.

3.2. Computing Nash equilibria

Equilibrium configurations are detected by a computer-based optimization algorithm that iteratively solves parties' best response functions with respect to one of the two parameters to the other parties' best responses, then solves the best response function with respect to the other parameter. This procedure is repeated until convergence. The parameters to optimize are each party's salience parameter b_j; and the party's policy position on the second dimension, p_j.

The optimization procedure works as follows:

Step 1: Key features of the electorate and the party system are determined by a random draw. The β-parameter is initially set to a starting value of 0.5.

Step 2: Parties optimize $BR_j(\mathbf{p}, \mathbf{b})$ with respect to the vector of positions on the y-dimension, $\mathbf{p}$, in random order.

- The jth party optimizes its position on the y-issue dimension, given the other parties' current positions $\mathbf{p}' = (p'_1, \ldots)$.
- An updated $\mathbf{p}'$ is determined.

Step 3: Parties optimize $BR_j(\mathbf{p}, \mathbf{b})$ with respect to the vector of salience parameters, $\mathbf{b}$, in random order, given the updated position vector $\mathbf{p}'$ from Step 2.

- The jth party optimizes b_j.
- An updated β' is determined by $\beta' = \frac{1}{J} \sum b_j^*$.

Step 4: Steps 2 and 3 are repeated until an equilibrium ($\mathbf{b}^*$, $\mathbf{p}^*$) is reached in which no party has the incentive to unilaterally change either its salience, b_j^* or its position, p_j^*, given that all other parties adhere to ($\mathbf{b}^*_{-j}$, $\mathbf{p}^*{}_{-j}$).

In the following each step is described in more detail.

Step 1: The following features of the competitive situation are determined at the beginning of a run: the number of parties is randomly chosen from the set of integers $\{3, 4, 5, 6\}$. These numbers represent the reasonable number of viable parties in Western-type multiparty systems. Next, each parties' position on the principal policy dimension and on the y-dimension is chosen by independent random draws from a normal distribution with mean zero and standard deviation of one. Then, parties' valence is determined by a random draw from a uniform distribution on the interval [0, 1]. The party system is thus fully characterized. Next, the features of the electorate are determined. A total of 2000 voter ideal points are randomly drawn from a bivariate normal distribution with mean zero and standard deviation of one, and with covariance level σ, where σ is determined by a random draw from a uniform distribution over the interval [0, 1]. The level of σ indicates the degree of alignment between voters' preferences on the first and second issue dimensions.

Step 2: Parties choose optimal vote-maximizing positions on the y-dimension. The order at which parties take turn is determined by a random permutation of k at the beginning of Step 2. Concretely, the best response function is optimized with respect to $\mathbf{p}$ for each party, given the current party configuration with updated party positions p_{j-1} up to j, such that party j already reacts optimally to the optimal position of parties 1 to $j-1$. Thus, the algorithm solves the best response functions to the best response functions of the other parties. The resulting party configuration $\mathbf{p}'$ enters the next step.

Step 3: Given the updated position vector p' of Step 2, parties' take turn in optimizing $BR_j(\mathbf{p}, \mathbf{b})$ with respect to $\mathbf{b}$. To prevent ordering effects, a random order is determined at the beginning of this step, at which parties optimize b_j. Each party chooses its optimal b'_j one after the other given the current value of β. At the end of Step 2, β is updated by: $\beta' = \frac{1}{j}\sum b'_j$. This reflects the idea that the overall, electoral salience is the product of each party's issue emphasis taken together. This updated salience parameter enters the next step.

Step 4. Steps 2 and 3 are repeated and the salience parameters and position coordinates are updated after each step until an equilibrium is reached. An equilibrium is reached when no party has an incentive to alter p_j^* and b_j^* by a value larger than a pre-defined ϵ-value of 0.001, given the optimal positions and salience strategies of the remaining parties, $\mathbf{p}^*_{-j}$ and $\mathbf{b}^*_{-j}$. This corresponds to the equilibrium concept of Nash: no party gains votes by abandoning the equilibrium strategy. Once such an equilibrium state is reached, it is stable.[2]

A total of 2000 runs are performed to search for Nash equilibria for a wide range of parameter constellations concerning features of the party system and the electorate. One might be skeptical about the predefined ordering of first optimizing the position, and only then optimizing the salience parameter. However, since Steps 2 and 3 are repeated until convergence, the question of which order to pick is only relevant for the first iteration. To test whether this first step influences equilibrium outcomes, an additional 500 runs were performed in which parties first optimize the salience parameter, and then the position. The results are documented in Figures 5 and 6 in the Appendix. It shows that the pattern of results is nearly identical to the 2000 runs reported in the following, thus confirming that the ordering of optimizing the two sets of parameters does not substantively affect the results.

Another concern regards the dynamics of parties' issue emphasis. In the model setup, parties can in principle re-adjust their salience levels at each iteration, which might result in zigzagging strategies. However, such a behavior is not realistic nor substantively meaningful. One way to prevent repeated fluctuations in parties' optimal salience level would be to restrict their strategy space by only being able to monotonically increase or decrease β. This might be too restrictive, however, as it does not allow for parties to correct their course. Especially on new issues, parties might change their course on an issue quickly after observing their rivals' and voters' reactions. Therefore, it is preferred to keep the strategy space flexible. To inspect whether parties' salience parameters do fluctuate unreasonably throughout the equilibrium search, their salience levels are traced graphically. The results for 41 equilibrium searches are shown in Figures 1 to 3 in the online Supplemental Appendix. It shows that there is some fluctuation at the very beginning of the equilibrium search, but not always, not for all parties, and most importantly, it does usually not occur repeatedly or at later stages. Parties converge quite quickly to their ultimate salience level, and repeated zigzagging is not observed. Though this is no final proof that zigzagging never happens, it shows that it does not usually occur throughout the equilibrium search and that no further restrictions on the strategy space are necessary.

4. Results

This section presents the results of 2000 equilibrium searches for different parameter configurations. Overall, the algorithm typically converges quickly to an equilibrium state. The mean number of iterations of Steps 2 and 3 is 9. If the algorithm did not converge after 500 iterations, it was forced to stop. This occurred in 13 out of 2000 cases. To inspect whether the equilibrium configurations are unique, given the parameter constellations, 20 additional equilibrium searches were conducted. In each of these 20 analyses, the parameter constellation was held constant, and 200 equilibrium searches were performed for each of these identical cases, randomizing the order in which parties move. In each of these 200 runs for each of the 20 cases, the parties always converged to the same equilibrium position and salience levels. This lends strong support to the notion that the detected equilibrium configurations are indeed unique. The equilibrium results of these additional analyses are visualized in Figures 4 to 8 in the online Supplemental Appendix.

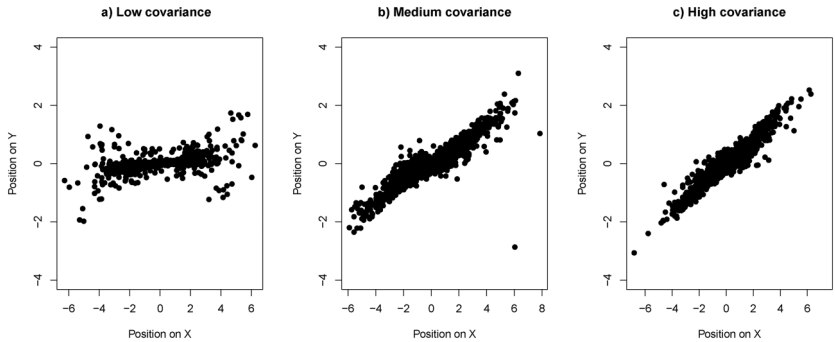

Figure 1. Equilibrium positions on the second dimension for different covariance levels of voter preferences.
Note: Low covariance: $\sigma < 0.1$, medium covariance: $\sigma > 0.4$, and $\sigma < 0.6$; high covariance: $\sigma > 0.9$.

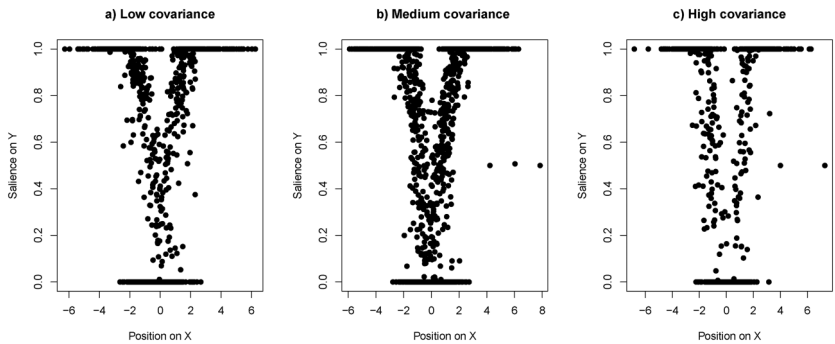

Figure 2. Equilibrium salience levels for the second dimension for different covariance levels of voter preferences.
Note: Low covariance: $\sigma < 0.1$, medium covariance: $\sigma > 0.4$, and $\sigma < 0.6$; high covariance: $\sigma > 0.9$.

The position and salience vectors characterizing the equilibrium configuration of the main analysis were saved in a data frame together with the party system features and the level of voter covariance for the specific run. This resulted in a dataset containing 9088 rows, where each observation is a party that is nested in one of the 2000 party systems that were randomly generated. Figures 1 and 2 present a first graphical overview on the generated equilibrium data.

Figure 1 plots the equilibrium positions of parties depending on their position on the primary policy dimension x for different levels of covariance among the electorate. The pattern of results supports existing research which shows that parties maximize their votes by locating close to a principal axis of the policy space, which maximizes voter variance (Shikano, 2008). Furthermore, the results show that parties that take extreme positions on the primary policy dimension will maximize their votes by also taking a more extreme position on the second dimension, than those parties that are moderate

on the first dimension. Regarding optimal salience levels, Figure 2 shows that those parties that are more extreme on the first dimension more often maximize their vote by putting high salience on the second dimension, whereas moderate parties on the first dimension tend to maximize their votes by emphasizing the first policy dimension. The level of covariance seems to influence that relation in that optimal salience levels are overall larger for the second dimension, the more closely voter preferences are aligned on both dimensions.

To test these relations in a systematic way, two regression models are fitted. The models estimate the effects of party characteristics, as well as party system features, on the optimal position on the second policy issue dimension, as well as on the optimal salience parameter. Since the positional strategies are assumed to be symmetric around the mean voter, the dependent variable in the first regression model is the absolute position on *y*. Since the electorate is drawn from a bivariate normal with mean zero, this indicates the distance from the mean voter on the second policy dimension *y*. At the party level, we are interested in the effects of the position on the first policy dimension, and of valence. Concerning the position on the *x*-axis, the relevant variable is how far the party is located from the mean. Since the mean voters' position lies at the zero point by definition of the sampling procedure, this is operationalized via a parties' absolute position on *x*. Concerning the impact of party valence, the relevant variable is whether a party holds a valence advantage over the other parties in a specific party system. Therefore, valence has to be measured in relation to the valence distribution within a party system. I construct a dummy variable that takes on the value 1 for parties whose valence level lies above the median valence within the respective party system, and 0 otherwise. Since the status of being a pole party might affect the salience incentives beyond the mere distance from the mean voter, a dummy variable is constructed that captures the pole party status on the *y*-axis. The party system features are more straightforwardly operationalized. The number of parties in the system and the level of voter covariance are taken as given. To consider the nested data structure, a mixed-regression model is estimated, modeling random intercepts at the party-system level. Table 1 presents the results.

4.1. Drivers of policy convergence on Y

The results with respect to the equilibrium position are presented in Models 1 and 2 in Table 1. I first estimate a model with main effects only, and then test for possible interaction effects in Model 2. To ease the interpretation of the two-way interactions, a marginal effects plot for each of the six interaction terms is displayed in Figure 3.

The existing literature has identified party valence as a driver of policy divergence. The results presented here support that valence plays an important role in defining a party's equilibrium position. It has a negative effect on the equilibrium position's distance from the mean on *Y* in Model 1, which is statistically significant at the one percent level. Thus, low valence parties maximize their votes by taking more extreme positions on the second policy issue dimension *Y*. The results in Model 1 further show that a parties' position on the *x*-dimension is a strong predictor of its equilibrium position on the *y*-dimension. The further a party is located from the mean voter on *X*, the more

Table 1. Mixed regression models on equilibrium position (1) and salience (2) based on 2000 equilibrium searches.

	Dep. Var.:		*Dep. Var.:*	
	|Equilibrium position on *Y*|		Equilibrium salience on *Y*	
	Model 1	Model 2	Model 3	Model 4
Party level effects				
(Intercept)	−0.57***	−0.13***	0.11***	0.10*
	(0.01)	(0.03)	(0.02)	(0.04)
High valence	−0.07***	0.02	0.07***	0.16***
	(0.00)	(0.02)	(0.01)	(0.04)
Dist. from mean on *X*	0.30***	0.07***	0.23***	0.20***
	(0.00)	(0.01)	(0.00)	(0.01)
Pole party on *Y*			0.10***	0.10***
			(0.01)	(0.01)
Party system level effects				
Covariance	0.50***	−0.18***	−0.04***	0.04
	(0.01)	(0.04)	(0.01)	(0.06)
No. of parties	0.06***	0.02**	0.01**	0.02
	(0.00)	(0.01)	(0.00)	(0.01)
Interaction terms				
High val. × Covariance		0.00		−0.01
		(0.01)		(0.02)
High val. × No. of parties		−0.01***		−0.01*
		(0.00)		(0.01)
High val. × Dist. on *X*		−0.02***		−0.02**
		(0.00)		(0.01)
Covariance × Dist. on *X*		0.30***		0.04***
		(0.01)		(0.01)
No. of parties × Dist. on *X*		0.02***		0.00
		(0.00)		(0.00)
Covariance × No. of parties		0.04***		−0.01
		(0.01)		(0.01)
AIC	−679.88	−2866.33	5433.80	5459.33
BIC	−630.07	−2773.83	5490.71	5558.93
Log likelihood	346.94	1446.16	−2708.90	−2715.66
Num. obs.	9088	9088	9088	9088
Num. groups: run	2000	2000	2000	2000
Var: run (intercept)	0.01	0.01	0.00	0.00
Var: Residual	0.05	0.04	0.11	0.11

AIC: Akaike information criterion; BIC: Bayesian information criterion.
***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

extreme its equilibrium position on *Y*. The model only considers a party's distance from the mean on both dimensions, so we cannot rule out that its equilibrium position lies at the opposite side on the *Y*-dimension. However, from the graphical display of equilibrium configuration in Figure 1 we can infer that parties will find their equilibrium position on the same side as their location on *X*. The effects of the party system features indicate

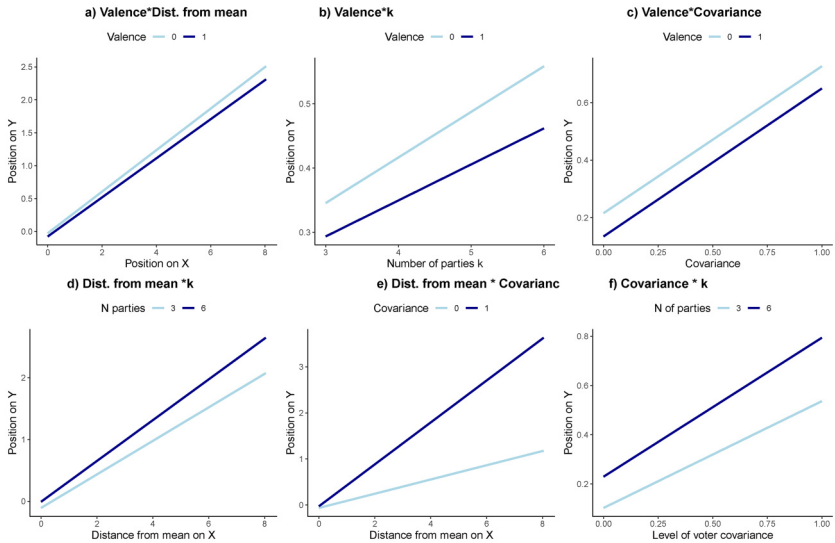

Figure 3. Marginal effect plots for interaction terms on equilibrium positions on *Y*, based on Model 2 in Table 1.

that both the level of voter covariance and the number of parties in the system drive policy divergence in equilibrium.

Next, turning to Model 2 it shall be inspected how these effects interact with each other. Figure 3 visualizes this by plotting the marginal effects of all interaction terms. These plots confirm that both the distance from the mean on *X* (esp. panels (a) and (d)), as well as the level of covariance (esp. panels (e) and (f)), are strong predictors of a party's equilibrium position. It further tells that the effect of the distance from the mean on *X* is significantly moderated by the level of covariance among the electorate: the magnitude of the effect is stronger (positive), the larger the level of covariance. If voter preferences on *Y* are completely independent from their preferences on *X*, such that the new issue dimension really cross-cuts the existing line of conflict, a parties' optimal location on the *y*-axis will be less dependent on its position on the *x*-axis. Party valence and the number of parties in the system also affect the equilibrium positions, but to a much smaller extent.

Taken together, we expect stronger centrifugal effects on a second policy dimension for parties that are located at the extremes of the primary policy dimension. Further, we expect centrifugal tendencies to be stronger the more aligned voters' preferences are on the two policy dimensions, the larger the party system, and the lower the parties' valence.

4.2. Drivers of issue salience on Y

How do parties' characteristics and features of the party system influence parties' optimal salience levels? Models 3 and 4 in Table 1 present the results. Again, the first model includes main effects only, and all possible two-way interaction terms are included as

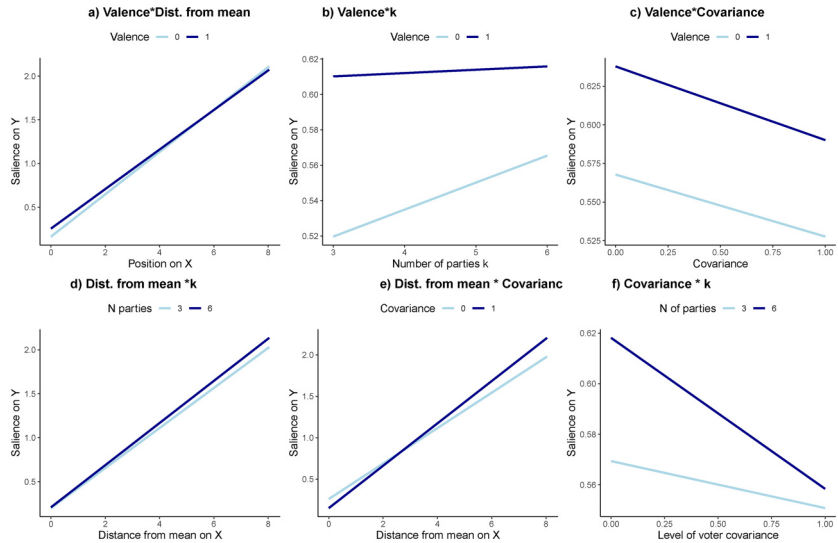

Figure 4. Marginal effect plots for interaction terms on equilibrium salience of *Y*, based on Model 4 in Table 1.

predictors in the second model. We use the graphical display of these terms in Figure 4 to interpret the findings. Concerning the main effects in Model 3 we find that distance from the mean voter on the *x*-dimension is a strong predictor of equilibrium salience levels. Valence surprisingly exerts a positive effect, but the magnitude of this effect is quite small. Being one of the two pole parties in the equilibrium configuration further increases the optimal salience level by 0.1.

The finding on valence is surprising. Based on the empirical research on parties' issue emphasis, one might come to a different conclusion. It reports that small, new, opposition parties put much emphasis on secondary policy issues like the environment, immigration, or EU integration (De Vries and Hobolt, 2020; Meyer and Wagner, 2013). This suggests that low valence drives salience: small parties seek to overcome their valence disadvantage by politicizing a new policy issue, on which they can take a popular position. We would thus expect a negative effect of valence. However, the results presented here show that it is their rather extreme ideological position that drives incentives to emphasize a secondary issue. Empirically, low valence and extreme ideological positions are strongly correlated, which makes it difficult to disentangle the effects of both covariates based on empirical data. Since both parameters vary randomly in the dataset presented here, we can easily separate both effects in the regression analysis.

It also shows that the magnitude of the effect of distance from the mean voter on the first dimension is much larger than that of valence. To verify that, note that salience levels range between 0 and 1, a status change from being a low to a high valence party increases salience by only 0.07 scale points. Being located one scale point further away from the mean voter, however, already increases salience by 0.23 scale points (Model 3 in

Table 1). Thus, in real-world politics, the positive effect of valence for moderately located parties will easily be overruled by the much larger positive effect of ideological distance, such that low valence parties will often have much larger incentives to push secondary issues.

That high valence parties also benefit if voters consider a second policy issue is reasonable: given that all parties seek to take a popular position on the new dimension, as indicated by the equilibrium positions shown in Figure 1, it will be even more attractive for high valence parties to push the salience of this new dimension on which parties differ not so much in terms of their position. Overall, this will then downplay the role of policy in the vote calculus and enhance their valence advantage. However, the positive effect of valence is quite small, which indicates that it is not a winning strategy for high valence parties to minimize the salience of the primary, left-right policy dimension completely. The winning formula seems to be moderate engagement for high valence parties. In a related project, I show that it is indeed a vote-maximizing strategy for high-valence center parties to moderately engage with secondary issues when facing competition from a niche party (Kurella and Mundschenk, 2025). This is also in line with empirical results showing that there is much convergence in terms of which issues parties talk about, and that mainstream parties also engage with the issues that are introduced by challengers (Green-Pedersen, 2007). It further shows that issue avoidance is not a winning strategy in the long run, partly supporting Meguid's (2008) findings that engagement with the new issue is a promising strategy for mainstream parties that face competition from a new challenger party.

Model 3 further indicates that the level of covariance between the first and second policy issue dimension decreases parties' incentives to emphasis the second dimension. This corroborates Riker's original idea of heresthetics and issue entrepreneurship theory (De Vries and Hobolt, 2020; Hobolt and De Vries, 2015). Considering all possible interactions in Model 4 paints a more nuanced picture. Panel (e) in Figure 4 indicates that the level of covariance boosts the positive effect of distance from the mean voter on equilibrium salience levels, which partly supports issue yield theory: parties' incentives to engage with a second policy issue are larger, if their electorate agrees on the optimal policy on the new policy dimension (stronger correlation of preferences). However, this only holds for ideologically extreme parties. Our conclusion is that issue entrepreneurship theory always holds: parties have incentives to introduce wedge issues. However, for ideologically extreme parties, issue yield theory also applies: they face incentives to also emphasize secondary issues that are well aligned with the existing conflict line.

Further, the results show that the number of parties increases equilibrium salience. As with parties' positional strategies, the number of competitors drives strategy divergence. Inspecting the pattern of interaction terms of Model 4 shows that the positive effect of the number of parties is contingent on the valence level: high valence parties have large salience levels in equilibrium, irrespective of the number of parties in the system. For low valence parties, the number of competitors plays a role. The more competitors, the larger their equilibrium salience. The number of parties in the system further moderates the effect of the level of voter covariance: while a large covariance generally lowers equilibrium salience levels, this relation is stronger in systems with more parties, while the

relation is only weakly negative in systems with few parties. Yet the visual inspection of the marginal effects plotted in Figure 4 indicate that these effects are of low magnitude.

5. Conclusion

This research presents a formal model of party competition in a two-dimensional policy space, in which parties can choose an optimal policy position on the second issue dimension, as well as an optimal salience. Based on the formal and empirical literature on party competition, several factors have been identified to be likely drivers of policy divergence and factors to influence issue engagement. These are the distance from the mean voter, valence advantages, the number of parties in the system, and the level of alignment between the two policy issue dimensions. Computational methods have been employed to detect equilibrium configurations for a wide range of parameter constellations. Regression models have then be used to derive comparative statics of these party and party system features on equilibrium position and salience.

The results presented here partly confirm existing findings: Valence advantages lead to policy moderation, while low valence parties maximize their votes by taking more extreme positions. The number of parties in the system also drives policy divergence. Furthermore, the model generated novel insights on the mechanism of party competition concerning the effects of valence and voter alignment. Concretely, it has been shown that valence advantages increase the incentives for engagement with secondary policy issues. This partly contradicts the existing literature, which has so far argued that new, small, opposition parties are pursuing entrepreneurial strategies and pushing the salience of secondary policy issues. The model and results presented here suggest that it is not the fact that these parties are disadvantaged on non-policy grounds which makes it attractive for them to pursue such a strategy, but rather their (ideological) extremeness. The distance from the mean voter on the primary line of conflict indeed has a strong positive effect on the equilibrium salience for the second policy issue dimension.

Novel insights are also generated with respect to the nature of the secondary policy issue dimension. While previous research has formulated contradicting hypothesis on which type of issues parties will emphasize, the results presented here show that it depends on party and party system characteristics. The main effect of the level of covariance is negative, supporting the idea of heresthetics: parties face incentives to emphasize cross-cutting issues. These incentives are larger, the larger the number of parties in the system. Yet the results also partly confirm the opposing argument brought forward by issue yield theory, by indicating that ideological extreme parties will even face stronger incentives to engage with issues on which their constituency is in broad agreement. This applies to issues that are well aligned with the primary line of conflict.

The results thus present a theory-driven explanation for the empirical finding of small niche parties emphasizing secondary policy issues, and major mainstream parties taking up these issues in the long run. Moreover, it indicates that the role of valence in determining salience strategies has to be reconsidered. However, this research comes not without limitations. The model of party competition presented here is a very parsimonious Downsian model that disregards, for example, that parties might hold issue ownership. Establishing ownership on the secondary dimension might, for example, go along with

a dimension-specific valence advantage, that is not considered in the present model. Future research might investigate the effects of such a model adjustment.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. However, one way to influence competition on the first dimension is by increasing β, the salience of the y-axis, to the extent that the x-dimension has no weight in the voter utility function anymore.
2. Yet it is not guaranteed that they are unique. This means that it is possible that we detect multiple equilibria, and the question of which equilibrium state will be reached might depend on random factors.

References

Adams J (2012) Causes and electoral consequences of party policy shifts in multiparty elections: Theoretical results and empirical evidence. *Annual Review of Political Science* 15: 401–419.

Adams J, Clark M, Ezrow L, et al. (2004) Understanding change and stability in party ideologies: Do parties respond to public opinion or to past election results? *British Journal of Political Science* 34(4): 589–610.

Adams J, Ezrow L and Somer-Topcu Z (2011) Is anybody listening? Evidence that voters do not respond to European parties' policy statements during elections. *American Journal of Political Science* 55(2): 370–382.

Adams J, Merill III S and Zur R (2024) How much does issue salience matter? A model with applications to the UK elections. *European Journal of Political Research* 63(2): 798–809.

Adams J, Merrill S and Grofman B (2005) *A Unified Theory of Party Competition*. Cambridge: Cambridge University Press.

Arrow KJ (1951) *Social Choice and Individual Values*. NewYork: John Wiley and Sons.

Basu C (2020) Bridging spatial and saliency theory: Party size and issue selection in campaigns. *Political Science Research and Methods* 8(3): 444–458.

Bélanger E and Meguid BM (2008) Issue salience, issue ownership, and issue-based vote choice. *Electoral Studies* 27: 477–491.

Budge I and Farlie DJ (1983) *Explaining and Predicting Elections: Issue Effects and Party Strategies in Twenty-Three Democracies*. London: Allen & Unwin.

Budge I, Klingemann H-D, Volkens A, et al. (2001) *Mapping Policy Preferences. Estimates for Parties, Electors, and Government 1945–1988*. Oxford: Oxford University Press.

Carmines EG and Stimson JA (1986) On the structure and sequence of issue evolution. *American Political Science Review* 80: 902–921.

Carmines EG and Stimson JA (1989) *Issue Evolution. Race and the Transformation of American Politics*. Princeton, NJ: Princeton University Press.

Clark M (2009) Valence and electoral outcomes in Western Europe, 1976–1998. *Electoral Studies* 28: 111–122.

Cox GW (1990) Centripetal and centrifugal incentives in electoral systems. *American Journal of Political Science* 34: 903–935.

Dennison J (2020) How issue salience explains the rise of the populist right in Western Europe. *International Journal of Public Opinion Research* 32(3): 397–420.

De Sio L, De Angelis A and Emanuele V (2018) Issue yield and party strategy in multiparty competition. *Comparative Political Studies* 51(9): 1208–1238.

De Sio L, Franklin MN and Weber T (2016) The risks and opportunities of Europe: How issue yield explains (non-) reactions to the financial crisis. *Electoral Studies* 44: 483–491.

De Sio L and Weber T (2014) Issue yield: A model of party strategy in multidimensional space. *American Political Science Review* 108(4): 870–885.

De Vries CE and Hobolt SB (2012) When dimensions collide: The electoral success of issue entrepreneurs. *European Union Politics* 13(2): 246–268.

De Vries CE and Hobolt SB (2020) *Political Entrepreneurs: The Rise of Challenger Parties in Europe*. Princeton, NJ: Princeton University Press.

Downs A (1957) An economic theory of political action in a democracy. *The Journal of Political Economy* 65: 135–150.

Feld SL, Merrill S and Grofman B (2014) Modeling the effects of changing issue salience in two-party competition. *Public choice* 158: 465–482.

Franzmann ST, Giebler H and Poguntke T (2020) It's no longer the economy, stupid! Issue yield at the 2017 German federal election. *West European Politics* 43(3): 610–638.

Green-Pedersen C (2007) The growing importance of issue competition: The changing nature of party competition in Western Europe. *Political Studies* 55: 607–628.

Green-Pedersen C and Mortensen PB (2010) Who sets the agenda and who responds to it in the Danish parliament? A new model of issue competition and agenda-setting. *European Journal of Political Research* 49(2): 257–281.

Groseclose T (2001) A model of candidate location when one candidate has a valence advantage. *American Journal of Political Science* 45(4): 862–886.

Hobolt SB and De Vries CE (2015) Issue entrepreneurship and multiparty competition. *Comparative Political Studies* 48(9): 1159–1185.

Kristensen TA, Green-Pedersen C, Mortensen PB, et al. (2022) Avoiding or engaging problems? Issue ownership, problem indicators, and party issue competition. *Journal of European Public Policy* 30(12): 2854–2885.

Kurella A-S and Mundschenk L (2025) Optimal party strategies on niche issues: A computational approach to multiparty competition for position and salience. *Unpublished manuscript*.

Kurella A-S and Rapp M (2025) The role of salience and competitive advantages in spatial models of political competition. *The Journal of Politics* (forthcoming).

Kurella AS and Pappi FU (2015) Combining ideological and policy distances with valence for a model of party competition in Germany 2009. *Journal of Theoretical Politics* 27(1): 86–107.

Lin T-M, Enelow JM and Dorussen H (1999) Equilibrium in multicandidate probabilistic spatial voting. *Public choice* 98: 59–82.

McKelvey R and Patty JW (2006) A theory of voting in large elections. *Games and Economic Behavior* 57: 155–180.

Meguid BM (2005) Competition between unequals: The role of mainstrem party strategy in niche party success. *American Political Science Review* 99(3): 347–359.

Meguid BM (2008) *Party Competition Between Unequals. Strategies and Electoral Fortunes in Western Europe*. New York: Cambridge University Press.

Meyer TM and Wagner M (2013) Mainstream or niche? Vote-seeking incentives and the programmatic strategies of political parties. *Comparative Political Studies* 46(10): 1246–1272.

Pardos-Prado S (2012) Valence beyond consensus: Party competence and policy dispersion from a comparative perspective. *Electoral Studies* 31(2): 342–352.

Petrocik JR (1996) Issue ownership in presidential elections, with a 1980 case study. *American Journal of Political Science* 40(3): 825–850.

Plott CR (1967) A notion of equilibrium and its possibilty under majority rule. *American Journal of Political Science* 57(4): 787–806.

Riker WH (1982) *Liberalism Against Populism – A Confrontation Between the Theory of Democracy and the Theory of Social Choice*. Long Grove, IL: Waveland Press.

Schofield N (2004) Equilibrium in the spatial 'valence' model of politics. *Journal of Theoretical Politics* 16(4): 447–481.

Schofield N (2005a) Local Political Equilibria. In: *Social Choice and Strategic Decisions*, ed. Austen-Smith David and Duggan John. Studies in Choice and Welfare Springer Berlin Heidelberg pp. 57–91. http://dx.doi.org/10.1007/3-540-27295-X_3.

Schofield N (2005b) A valence model of political competition in Britain: 1992–1997. *Electoral Studies* 24: 347–370.

Schofield N, Gallego M and Jeon JS (2011a) Leaders, voters and activists in the elections in Great Britain 2005 and 2010. *Electoral Studies* 30: 484–496.

Schofield N, Gallego M and Jeon JS (2011b) Leaders, voters and activists in the elections in Great Britain 2005 and 2010. *Priorat Workshop in Theoretical Political Science* pp. June 16–18, 2011, Barcelona, Spain. http://polisci.wustl.edu/files/polisci/imce/es-uk-alltables-correctedfeb29.pdf.

Schofield N and Sened I (2005a) Modeling the interaction of parties, activists and voters: Why is the political center so empty? *European Journal of Political Research* 44: 355–390.

Schofield N and Sened I (2005b) Multiparty competition in Israel, 1988–96. *British Journal of Political Science* 35: 635–663.

Schofield N and Sened I (2006) *Multiparty Democracy*. New York, NY: Cambridge University Press.

Shikano S (2008) Die eigendynamik zur eindimensionalität des parteienwettbewerbs: Eine simulationsstudie. *Politische Vierteljahresschrift* 49(2): 229–250.

Sigelman L and Buell Jr EH (2004) Avoidance or engagement? Issue convergence in US presidential campaigns, 1960–2000. *American Journal of Political Science* 48(4): 650–661.

Vasilopoulou S and Zur R (2024) Electoral competition, the EU issue and far-right success in Western Europe. *Political Behavior* 46(1): 565–585.

Wagner M (2012a) Defining and measuring niche parties. *Party Politics* 18(6): 845–864.

Wagner M (2012b) When do parties emphasise extreme positions? How strategic incentives for policy differentiation influence issue importance. *European Journal of Political Research* 51(1): 64–88.

Wagner M and Meyer TM (2014) Which issues do parties emphasise? Salience strategies and party organisation in multiparty systems. *West European Politics* 37(5): 1019–1045.

Appendix

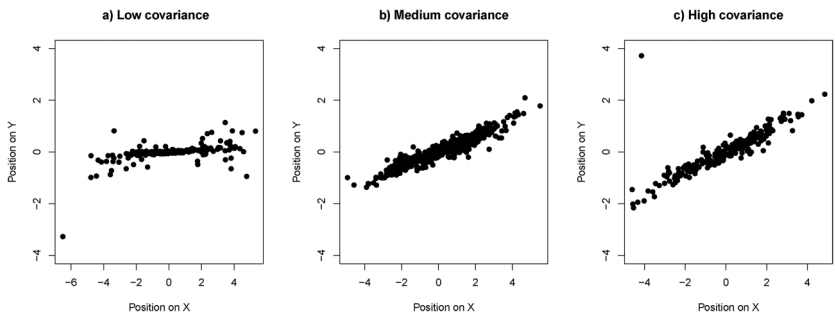

Figure 5. Equilibrium positions on the second dimension for different covariance levels of voter preferences, reversed order.
Note: Low covariance: $\sigma < 0.1$, medium covariance: $\sigma > 0.4$, and $\sigma < 0.6$; high covariance: $\sigma > 0.9$.

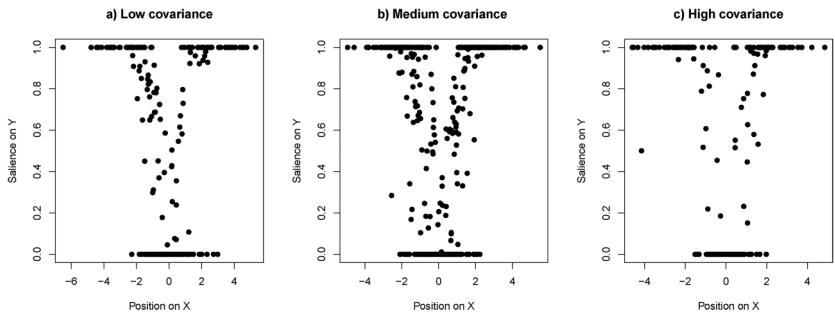

Figure 6. Equilibrium salience levels for the second dimension for different covariance levels of voter preferences, reversed order.
Note: Low covariance: $\sigma < 0.1$, medium covariance: $\sigma > 0.4$, and $\sigma < 0.6$; high covariance: $\sigma > 0.9$.