

Opposition strategies in legislative review: Tracing the strategic use of legislative amendments using syntax-aware automated text analysis*

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Abstract. After their introduction to parliament, government bills are often heavily scrutinized. In parliamentary systems, the vast majority of amendments are typically proposed by opposition parties. Yet, given their minority status, opposition parties rarely manage to change the substance of legislation. As drafting amendment proposals is a fairly resource-intensive endeavor, the efforts of opposition parties in reviewing government bills constitute an empirical puzzle. Covering three legislative periods of the German state-level assembly of *Baden-Württemberg* in the years 2006-2019, we study the use of opposition amendments in legislative review and identify two mechanisms to explain this puzzle. First, we demonstrate that whereas coalition parties tend to submit few but labor-intensive amendments which aim to redraft portions of a bill (constructive review), legislative review by opposition parties takes a significantly simpler approach and often torpedoes legislation by proposing to delete unfavored passages (destructive review). Second, we present evidence that legislative review by opposition parties is shaped by intra-opposition position-taking dynamics where influencing the substance of a bill might not be the prime consideration. Methodologically, the paper advances an automated text analysis system which is able to interpret the highly structured language of legislative text, enabling a considerably more fine-grained perspective on legislative review than previous research by focusing on the content of individual amendment proposals.

Keywords: *Government-opposition interactions, opposition strategies, legislative amendments, automated text analysis, Germany.*

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Introduction

Why do opposition parties in parliamentary systems excessively propose legislative amendments despite the fact that opposition proposals rarely make it into coalition policy? After their introduction to parliament, government bills are often subject to considerable opposition review. Currently, the study of legislative bargaining poses an empirical puzzle. While success rates of non-government amendments are typically low, opposition parties actively engage in the review of government bills. Moreover, the process of formally introducing bill amendments is fairly costly, as it requires time, expertise, and human resources. Such resources are particularly scarce for opposition parties, which comprise fewer MPs and parliamentary staff. Yet, rather than narrowing government control to parliamentary questions, taking stances in the plenary, and introducing own bill proposals, oppositional MPs extensively scrutinize government bills with the vast majority of legislative amendments being submitted by opposition parties (Russel and Gover 2017, Thompson 2015). The literature on legislative review has surprisingly little to say about opposition parties in this process as authors have focused on review within coalition governments, thus neglecting the patterns and motivations for bill review which is exerted by non-government parties (Martin and Vanberg 2004, 2005, Dixon and Jones 2019, Fortunato 2018, Fortunato et al. 2017, Pedrazzani and Zucchini 2013).

The goal of the present article is to explicitly situate the opposition in the legislative review process and to understand their attempts to amend government bills against no apparent policy pay-off. We tackle this question from two angles. First, we investigate *how* opposition parties engage in legislative review of government bills. We argue that the current literature has paid little attention to the substance of legislative scrutiny which falls into distinct categories. One can distinguish between two types of review, namely *constructive* and *destructive* review. Constructive review implies adding new passages or rewriting existing passages in a proposed bill, which requires considerably more effort in (re-)drafting the highly technical language of legislation. In contrast, destructive review simply aims to delete certain bill passages. Such amendments are considerably cheaper, as destructive review does not necessitate drafting legislative text to express substantive policy ideas. We argue that the distinction between constructive and destructive review helps understand the extent of oppositional attempts to change government bills. Whereas coalition parties actively shape policy by proposing costly and resource-intensive constructive amendments, non-government parliamentary groups are more likely to engage in destructive review which aims to delete unfavored bill passages.

Second, we focus on *why* opposition parties choose to propose amendments to government policy at all, emphasizing the importance that parliamentary work has for all competing parties. We argue that once an opposition party has engaged in the review of a government bill, this puts all other non-government competitors in a difficult position and pressures them into a race of electorally motivated issue competition. Hence, our second argument highlights the motives underlying amendatory action beyond policy-seeking and states that opposition parties use amendments to government bills for intra-opposition position-taking.

We test these expectations by constructing an original dataset of government proposals and legislative amendments analyzing more than 300 bills from three legislative periods (2006–2011, 2011–2016, 2016–ongoing) of the German state-level assembly of *Baden-Württemberg* in a quantitative case study. The study of oppositional review is methodologically challenging, as one cannot analyze opposition

efforts by tracing the observed changes of a bill throughout its legislative life cycle. While this strategy is useful for the study of coalition governments (Martin and Vanberg 2004, 2005, Dixon and Jones 2019, Fortunato et al. 2017, Pedrazzani and Zucchini 2013), it falls short once we shift our focus to the opposition, as unsuccessful legislative amendments do not translate into observed bill changes. Therefore, we advance a rule-based and syntax-aware text analysis system that can interpret the highly structured language of legislative text. Based on this system, we generate all hypothetical bill versions that had resulted from each opposition amendment and thus analyze legislative scrutiny independent of the success of an amendment in parliament. This allows us to shift our attention from the conventional focus on the subset of successful amendments towards an analysis of parties' intentions in legislative review.

Our answer to the puzzle of oppositional efforts in legislative review is twofold. First, we show that while coalition parties predominantly submit resource-intensive constructive work on legislation by rewriting parts of a proposed bill or proposing additional sections, opposition parties take a significantly simpler approach and often torpedo proposed bills by deleting unfavored passages and reducing the overall scope of a bill at low cost. Second, we show that opposition parties mutually trigger legislative review of government bills, resulting in a high number of non-government amendments overall. This provides evidence for intra-opposition position-taking in the review of government bills and suggests that opposition amendments are partly used to distinguish oneself from other opposition parties rather than from the bill author. Notably, this suggests that we find empirical evidence of intra-opposition dynamics in behavior observed as government-opposition interactions in legislative bargaining.

This article moves beyond the current state of the research in two ways. Substantively, several studies have prominently disentangled the incentive structures and institutional influences underlying legislative review (Martin and Vanberg 2004, 2005, Dixon and Jones 2019, Fortunato et al. 2017, Pedrazzani and Zucchini 2013). These works have exclusively focused on intra-coalition interactions in shaping policy output, but have systematically disregarded all unsuccessful amendments typically filed by members of the opposition. To the best of our knowledge, ours is the first study to explicitly incorporate the opposition into an analysis of legislative review. Indeed, the emphasis on successful amendments studying consecutive bill versions in current research might even have painted a lopsided picture of legislative review among coalition partners as there are instances when amendment proposals by a governing party fail in parliament. Overall, our study is able to move beyond the outcomes of bargaining interactions and get closer to the party intentions. Therefore, our methodological contribution is relevant for the broader study of legislative review beyond substantive questions of opposition strategies. We show how to circumvent the selection bias associated with the analysis of *accepted* bill changes which discards all downvoted amendments. We recover these acts of parliamentary scrutiny by constructing all bill changes that would have been observed if the respective amendments had been successful.

Government Bills and Opposition Review

Legislative scholars have long sought to distinguish between different types of parliamentary systems and their consequences for the status of opposition parties (Duverger 1951, Sartori 1966). In particular, the literature argues for a distinction between consensual and majoritarian democracies. Consensual systems are characterized by legislative processes that share political power in inclusive ways, including frequent compromises and a blurring of government and opposition roles (De Giorgi and Marangoni 2015). Marked by cooperation rather than competition among the main political forces, consensual behavioral patterns pave the way for cooperative policy-seeking motivations of opposition amendments in reviewing government policy. However, while consensual patterns have been observed in many European democracies (Saalfeld 1990), current cross-national trends point towards increasing competition in electoral and parliamentary arenas (Andeweg et al. 2008).

In competitive systems, interactions between government and opposition are characterized by clear confrontational lines. Law-making processes rarely incorporate opposition inputs and leave opposition parties significantly less room to actively shape policy. For instance, analyzing twelve major UK bills from 2005 to 2012, Russel and Gover (2017) show that an average of about 300 opposition amendments were proposed for each bill, but only 3.6 percent were ultimately successful. Thompson (2015) demonstrates that in the history of British law, opposition amendments in bill committees had a success rate of 0.6%. Shephard and Cairney (2005) reached similar conclusions in an analysis of the Scottish parliament. These studies show that opposition legislators in competitive majoritarian systems cannot expect to exert a direct impact on policy by filing amendments.

One of the peculiarities of competitive parliamentary systems is that even though non-governmental amendment proposals rarely succeed in impacting policy choices, members of the opposition actively engage in reviewing government bills that have been introduced into parliament. To be sure, one of the opposition’s main drivers in the parliamentary arena is to present policy alternatives to the government agenda. Through a variety of activities such as parliamentary questions, taking stances in the plenary debates, and introducing bill proposals, opposition parties can engage in government control, make substantive policy statements, and demonstrate credibility and competence to the public. Following the conventional wisdom, the intensity with which opposition parties in majoritarian systems revise government bills should take legislative scholars by surprise. In general, this is because the process of formally introducing bill amendments is considered an exceptionally resource-intensive activity (Fortunato 2018). The highly technical nature of legislation requires considerable expertise and labor to draft amendments for proposed bills. Moreover, as parliamentary party groups rather than individual MPs are the main actors in Europe’s parliamentary democracies, amendment proposals undergo profound discussions in internal forums after they are drafted, requiring considerable effort even after their initial draft stage. Against this background, one might expect opposition parties to primarily engage in alternative approaches to government review. First, this is because forms of government control that publicly take place in plenary sessions (rather than behind the doors of non-public committee meetings) might be more likely to be perceived outside of the parliamentary arena. Second, this is because it is considerably harder to demonstrate one’s own partisan profile through an amendment of government items rather than the introduction of own items that carry one’s explicit partisan frame. Consequently, the observation that opposition MPs actively engage in

legislative committees and intensively revise government legislation in competitive systems seems at least bewildering.

Opposition Strategies in Legislative Review: Bill Reduction and Intra-Opposition Position-Taking

This section seeks to shed light on the multifaceted picture underlying opposition review. First, we focus on the substance of legislative bargaining. How do opposition groups engage with cabinet parties' bills? We challenge the conventional wisdom that amendments are necessarily cost-intensive, develop a typology of amendatory action, and place opposition amendments in this framework. Second, we disentangle the motives that underly oppositional bill amendments. While opposition members clearly employ amendments to change the substance of the government proposal, we identify a distinct and less intuitive motive: Intra-opposition position-taking in government review.

THE SUBSTANCE OF OPPOSITION REVIEW

Understanding opposition changes to government bills is far from trivial. We argue that one needs to take the substance of legislation into account. To be sure, the operationalization and categorization of the substantive policy implications associated with amendment proposals is a challenging task. An ideal measure would capture the policy impact implied by the changes to a bill. As legislation is highly technical and varies over a large range of issue areas, extensive human expertise would be needed to classify each proposed change to a bill (Martin and Vanberg 2005) – an effort that is nearly impossible to accomplish in anything but selected case studies (cf. Thomson et al. 2006). Therefore, all studies interested in a more comprehensive perspective on legislative reform have adopted the strategy of merely counting the number of changed articles, bill lines, or words.

Despite these challenges, there is potential for a standardized and more nuanced operationalization of the substance of policy proposals. Specifically, we can group legislative amendments into three distinct categories. First, members of parliament can try to *add* to proposed legislation by extending the initial bill with additional paragraphs and sections. Second, MPs can propose to *alter* parts of legislation and thus rewrite the initial bill. Last, amendments can propose to *delete* words, sentences, or whole articles in order to substantively shape policy.

This distinction helps to identify two fundamentally different strategies of scrutinizing bills: Constructive and destructive review. While constructive review implies adding and rewriting proposed policy, destructive review relies on deleting passages (see Figure 1). Notably, these two types of bill scrutiny differ from each other on several dimensions. Most evidently, they differ drastically in terms of required resources like time, expertise and labor. While actively contributing to policy proposals through substituting passages with altered phrases or developing new bill sections requires an initial draft stage, accompanied by internal discussion and position finding, crossing out passages comes with considerably lower time and effort. Hence, it is not the formulation of amendment proposals per se that is resource-heavy. Instead, it is constructive review that we characterize as cost-intensive. On a second dimension, constructive and destructive review have distinct implications for policy. If

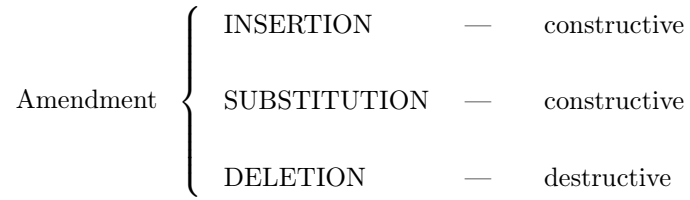


Figure 1: A typology of amendatory action.

insertions and substitutions are adopted, these imply a new bill that explicitly carries the author's fingerprints. In contrast, destructive review does not lead to tractable substantive passages as introduced by the party group engaging in review. Rather, by deleting passages, MPs merely try to prevent legislation that is perceived as unfavorable, reduce the scope of bills, and do not formulate a clear alternative for the deleted sections.

In light of this distinction, a party group not only decides whether to draft an amendment, but also about the specific strategy. The literature on coalition bargaining has lined out an array of mechanisms with which coalition members keep tabs on their partners. Among these strategies are the appointment of committee chairs aimed to "shadow" ministries held by their partners (Carroll and Cox 2012, Kim and Loewenberg 2005), filing parliamentary questions as a control mechanism in coalition governments (Höhm and Sieberer 2019), and, importantly, legislative review (Martin and Vanberg 2004, 2005, Pedrazzani and Zucchini 2013). However, coalition members are bound by informal rules that determine their behavior in committees and parliament, which have been referred to as collective cabinet responsibility (Laver and Shepsle 1994). These rules prohibit coalition MPs to openly vote against their coalition partners' policy proposals or publicly speaking out against policies once they have been adopted (Fortunato 2018). From our perspective, these informal rules should also manifest in an implicit rule not to torpedo coalition policy by crossing out and reducing legislation as introduced by cabinet members. On the other side, opposition parties are not bound by such rules and can follow a simpler strategy to bill review by deleting specific passages.

In spatial terms, it is plausible that opposition parties would more frequently find themselves in a position of wanting to delete specific passages from a proposed bill. If a bill proposal shifts the status quo away from a party, deleting certain passages may be a viable strategy to ensure a smaller status quo shift. As opposition parties are not considered in drafting governmental policy, wanting to engage in destructive bill review is therefore more likely for opposition than for governing parties. Moreover, destructive bill review might help opposition parties to circumvent the cost-intensive nature of drafting technical amendment proposals proposing new policy content, as removing bill sections comes with considerably lower effort.

Overall, we propose that the distinction between constructive and destructive review constitutes a key element to understanding opposition engagement with government bills, where governing parties are more likely to engage in constructive review and opposition parties in destructive review.

Hypothesis 1: While coalition parties rewrite and add sections to introduced legislation, opposition parties tend to reduce government bills by removing passages without substitution.

WHY DO OPPOSITION PARTIES AMEND?

So far, we have dealt with the *substance* of opposition review explaining *how* we expect opposition forces to amend government bills. We now turn to *determinants* of opposition review. Evidently, all parties could be described as policy-seeking collective actors which aim to shape legislative output (Tsebelis 2002). At the same time, all party groups find themselves in constant electoral competition, giving rise to position-taking as a second motive underlying parliamentary action. Importantly, several authors have argued that the introduction of amendments can serve as a tool for competitive issue differentiation (Fortunato 2018). First, as submitted proposals entail formal objectives that leave no room to maneuver, amendments can be characterized as manifest credible commitments rather than cheap talk. Second, as most parliaments publish parliamentary reports which are picked up by academics and the popular press, amendments are likely to be perceived by the electorate (Fortunato 2018). This could explain legislative scrutiny beyond the goal of shaping the policy output, as opposition parties are likely to amend government bills in order to set themselves apart from coalition policy through substantive position-taking.

Our argument differs from the current state of the literature by explicitly viewing opposition's attempts to change government bills through the lens of intra-opposition dynamics. Throughout a bill's legislative life cycle, non-government parties are not only incentivized to distinguish themselves from the position of the governing coalition as expressed by the bill, but they are simultaneously competing with other oppositional parties and need to signal divergence from their competitors as much as from the ruling coalition. We argue that such *intra-opposition* dynamics can be observed in the interactions between an oppositional party and the ruling *government* and hypothesize that intra-opposition position taking is evident in government bill review. To lay out the argument, focus on Figure 2 and suppose a new government bill gets introduced into parliament. In the figure, we simplistically depict amendment opportunities over time and how intra-opposition competition might trigger opposition scrutiny. Opposition parties have the chance to submit amendment proposals at various stages in the law-making process that go far beyond a single committee meeting, as proposals can be submitted (i) prior to the committee assemblage, (ii) within the committee meeting, and (iii) at the subsequent plenary stage. On the surface, opposition review of government bills is always observed as government-opposition interactions (solid arrows). However, the underlying motor for opposition amendments might *not* be triggered by the bill itself, but by foregoing proposals of competing opposition parties that lead to intra-opposition issue-competition. Here, although legislative review is observed as a dynamic between government and opposition, it is not the government actions that are the drivers of oppositional scrutiny of coalition bills, but earlier actions of other opposition parties (dashed arrow). Hence, once a competing opposition party engages in government review, we argue that other opposition parties are induced to file amendment proposals as well in order to keep up with the race of issue competition that takes place within the opposition benches. An opposition party should thus be more likely to file amendments given that an earlier amendment proposal was introduced by a competing opposition group. Based on this, we derive our second hypothesis that an opposition party's decision to submit an amendment proposal at time point $t - 1$ affects all opposition competitors' decisions to submit an amendment proposal at time point t .

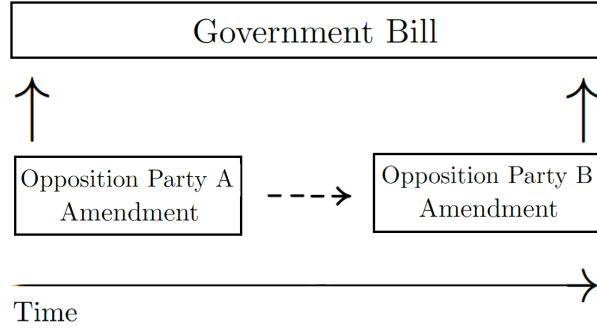


Figure 2: Government bills and oppositional review. How intra-opposition dynamics can trigger government-opposition interactions.

Hypothesis 2: Opposition parties amend government bills more extensively if competing opposition parties have become active in legislative review.

Empirical strategy

To investigate these hypotheses, we have compiled an original dataset from the last three legislative periods (2006-2011, 2011-2016, 2016-ongoing) of the *Landtag Baden-Württemberg*, one of the largest state-level parliaments in Germany. The sample goes beyond past efforts to assemble such data by [Martin and Vanberg \(2004, 2005, 2014\)](#) or [Pedrazzani and Zucchini \(2013\)](#) as it includes all *proposed* bill changes, whereas previous studies have restricted themselves to a comparison between consecutive bill versions, i.e. the sum of all *accepted* changes. Notably, [Fortunato \(2018\)](#) compiled a dataset that comprises the number of submitted rather than accepted article changes per party. We move beyond his effort in two ways. First, instead of the fairly indiscriminate measure of counting up all article changes, we automatically construct the exact bill versions that would have resulted from each amendment proposal. Second, rather than focusing on intra-coalition interactions, we explicitly include opposition amendments in our sample.

CASE SELECTION

Testing our argument requires a careful empirical strategy to disentangle the motives underlying legislative review by opposition parties in competitive majoritarian democracies. The case needs to fulfill two criteria. First, the generalizability of findings should be as broad as possible. Thus, we sought a case that shows (i) institutional variation in the observed time period, (ii) changes to the party system comprising various scenarios of party competition, (iii) and diverse governing coalitions (and thus opposition constellations).

Second, we note that one of the main drivers for oppositional review might simply be the desire to shape policy outcomes. In this vein, members of the opposition use windows of opportunity to alter legislation in a way that shifts an initial proposal closer to their own ideal point, independently

of competing opposition parties' behavior. If prevalent, such policy-seeking motivations might blur the strategic dynamics of an intra-opposition race that we aim to trace in this manuscript. We thus aim for a case where the success of opposition amendments is particularly low. This rules out the policy-seeking motivations of party actors and allows us to study the motives for amendatory action beyond shaping policy.

In line with these criteria, we capitalize on data from the *Landtag Baden-Württemberg*, focusing on the last three legislative periods. This case is particularly suitable for our research interest. First, our period of study is characterized by diverse coalition and opposition constellations. Within the last three legislative terms, there were three different coalition governments between CDU and FDP (2006-2011), Grüne and SPD (2011-2016), as well as Grüne and CDU (2016-ongoing). Second, in 2016, there was a notable change in the party system as the Alternative für Deutschland (AfD), a right-wing populist party, entered the parliament with 16% of seats. Third, chances for oppositional amendment success are extremely low in the *Landtag Baden-Württemberg*. Throughout the last three legislative periods, virtually no opposition amendment proposal was entirely accepted by the parliamentary assembly. Additionally, expert interviews with MPs underline that members of the opposition view the odds of success for their amendments as zero, as “our amendment proposals are *never* accepted” (Interviewee 2, SPD, November 07, 2018; c.f. a similar statement of Interviewee 3, AfD, January 16, 2019). Opposition amendments have little impact on coalition policy in competitive majoritarian systems, and Interviewee 1 (SPD, September 27, 2018) outlines how the *Landtag Baden-Württemberg* constitutes an extraordinary case:

“I want to explicitly point out that Baden-Württemberg is extraordinary in this regard. I don’t think there is another state-level parliament in which government proposals are adopted in this manner, and certainly not in the Bundestag. In all other parliaments, bill proposals are amended frequently.” (Translation by the authors)

In addition to its heterogeneity in coalition and opposition constellations, the low success rate makes the *Landtag* a well-suited example for studying motives of legislative review beyond shaping policy.

DATA

To construct the dataset, we started by collecting all legislative items and their amendment proposals from the official legislative database of the *Landtag*.¹ We excluded all budget bills from the analyses, as many of the procedural rules associated with such proposals differ from those of substantive legislation.² All other types of legislation are part of the analysis, resulting in 432 bill proposals out of which 314 are government bills, for which a total of 400 amendment proposals have been filed. With 330 non-government amendments, the vast majority of these were submitted by members of the opposition, and 70 were introduced by members of the governing coalition. The *Landtag Baden-Württemberg* comprised two non-government parties between 2006-2016 and three opposition parties in the current term. 122 of the government bills were introduced between 2006-2011, 141 were filed

¹Documentation of all parliamentary proceedings is published under <https://parlis.landtag-bw.de/parlis>.

²This follows Martin and Vanberg (2004) and Fortunato (2018).

in the second term under study (2011-2016), and, at the time of writing, 51 government bills were introduced in the current term. For each introduced bill, every opposition party has the opportunity to file amendments. Hence, this results in $122 \times 2 = 244$ observations at the bill-party level for the first legislative period. In the second term, $141 \times 2 = 282$ observations emerge. Since in the current period, three oppositional parliamentary groups are part of the *Landtag*, the data set is complemented with $51 \times 3 = 153$ observations resulting in a total of $122 \times 2 + 141 \times 2 + 51 \times 3 = 679$ observations at the bill-party level.

A SYNTAX-AWARE TEXT ANALYSIS SYSTEM

When analyzing legislative review, we face the methodological challenge of having to measure the extent of opposition bill changes. Typically, scholars of legislative bargaining have quantified parliamentary scrutiny by counting up the number of observed article changes between the initial bill version as introduced into parliament and the bill's final state. In contrast, the study of opposition review poses the difficulty that bill mutations which would result from opposition amendments are never observed. Notably, even if certain amendments were due to the proposals of opposition parties, we could not disentangle them from the changes introduced by government parties. Hence, to shed light on the substance of and motives for opposition review, we construct a rules-based and syntax-aware text analysis system that can interpret the highly structured language of legislation and automatically translates proposed amendments into the hypothetical bills that would have been observed if a specific amendment proposal had been up-voted.

Constructing such a system is possible because of the highly structured language of legislative text. First, legislative bills have a nested structure where individual sections are nested in paragraphs which are nested in articles. Moreover, legislative amendments can be interpreted as text manipulations within this structure, with all relevant text that an amendment proposal contains falling into one of three categories: *Structural components*, *operation references*, and *action identifiers* (see Figure 3). Structural components refer to the specific location where a proposed bill is to be modified. This location could be an article, "the first sentence of a paragraph" or a specific bill line. An operation reference defines the words that the proposed amendment uses for manipulating the original text. These words can be the original bill content that is deleted or new legislative text that is to be inserted. Lastly, action identifiers indicate which specific action should be executed at the identified location, such as "deleting", "substituting" or "inserting" text. The system reads in original bills, screens all amendment proposals for these three components, and executes all proposed text manipulations by a political party regarding a proposed bill. This results in a dataset at the bill-party level where one observation is the bill as it would result if all amendments of a party had been worked into the originally proposed piece of legislation. If a party did not file any amendments for a particular bill, the initial bill version as introduced into parliament is stored for this bill-party observation.

VARIABLES AND MEASUREMENTS

To trace opposition strategies of constructive and destructive review in the law-making process and to grasp the extent to which a proposed amendment would change a bill if it were adopted, we take

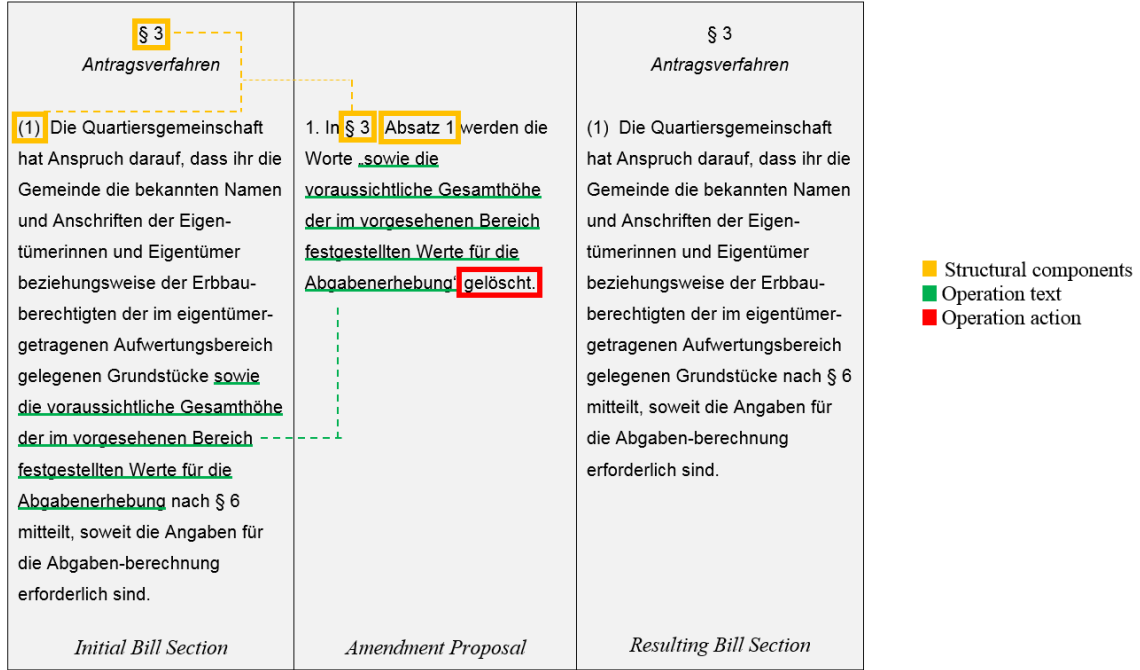


Figure 3: A syntax-aware automated text analysis system to execute proposed bill amendments.

two steps. First, a binary dependent variable indicates whether an opposition party submitted a (or multiple) amendment proposals towards an introduced government bill. Second, we measure the extent of legislative review using Levenshtein’s edit distance at the level of individual words (Sörensen 2007). We measure the distance between the bill as introduced to parliament and the bill as implied if all the amendments by a particular party were upvoted in parliament. For the two texts $\{\mathbf{a}, \mathbf{b}\}$, this distance is defined as

$$D_{a,b}(i, j) = \min \begin{cases} D_{i-1, j-1} & +0 \text{ if } \min(i, j) = 0 \\ D_{i-1, j-1} & +1 \text{ for substitution} \\ D_{i, j-1} & +1 \text{ for insertion} \\ D_{i-1, j} & +1 \text{ for deletion} \end{cases}$$

where $D_{a,b}(i, j)$ is the distance between the first i words of \mathbf{a} and the first j words of \mathbf{b} . Hence, Levenshtein’s distance between two texts (bills) can be interpreted as the minimum number of single-word edits (insertions, deletions, or substitutions) that are required to change one text into another. For each of the 679 observations, this measure is equal to zero if both texts are the same. At its maximum, it takes on the number of words of the longer string in a scenario in which a bill is fully rewritten and replaced by a more extensive one.

To study whether oppositional review of government bills is motivated by intra-opposition position-taking, we pursue the following strategy. For every bill-party observation at time point t , we construct a variable indicating whether a competing opposition party has filed an amendment for the same pro-

Table 1: Descriptive Statistics of Key Variables.

Variable	Mean	SD	Min	Max
Word Distance	15.63	78.26	0	1,365
Opposition Amendment	0.14	0.35	0	1
Competing Opposition Amendment $t - 1$	0.07	0.26	0	1
Government Amendment	0.12	0.33	0	1

posal at any time point $t - 1$ since the introduction of a government bill to parliament. Thus, this variable explicitly incorporates prior actions of direct competitors into our model of oppositional review. However, since some bills are more likely to be amended than others, we might find a positive effect simply because amendments of various opposition parties are jointly observed rather than directly influencing one another. One, this might be due to these bills being long and complex, providing more room for amendments overall. Two, certain policy fields might simply be more heavily scrutinized in legislative review than others. We counter these possibilities by explicitly including control variables indicating bill length and policy field in our model. Bill length is measured as the logged number of articles in the legislative proposal. To classify bills into policy fields, we sorted each bill into one policy field following the coding guidelines of the Comparative Agendas Project (Breunig and Schnatterer 2018).

In addition to the main variables of interest, we measure partisan resources using the size of a political party group and the temporal distance to the next election. Party size is measured by the number of parliamentary seats that a party obtained in the *Landtag*, as more MPs and more associated staff mean more potential to work out amendment proposals. The expectation is that larger parties will amend bills more heavily and more frequently. Since an upcoming election will bind MPs’ resources away from their parliamentary work and towards their campaign efforts, we additionally operationalize resources by the proximity to the next election. For each bill-party observation, the temporal distance is calculated as the number of days between the introduction of a bill and the prospective election day of the *Landtag*.³ Since past research has shown that government bills are scrutinized more heavily in committees chaired by opposition members (Fortunato et al. 2017), we include a binary indicator for opposition-led committees. Finally, we add a control variable whether any government party has filed an amendment proposal.

MODEL

Our empirical analysis is designed to evaluate the two substantive hypotheses that we formulated in Section 3. For Hypothesis 1 dealing with the substance of opposition strategies in legislative bargaining, we present graphical analyses comparing coalition and opposition parties’ tendencies for constructive and destructive review. Specifically, we test whether opposition amendments entail a higher share of destructive components which delete bill passages with no substitution than government proposals.

For Hypothesis 2, we turn to statistical modeling. Our first dependent variable is binary indicating whether opposition amendments have been filed at all. Hence, logistic regression is appropriate. Our

³The duration of a legislative period lasts five years. No early elections were called in the time frame of our analysis.

second dependent variable is the Levenshtein distance between the initial cabinet bill and the bill version implied if all amendments by a particular party are implemented. Since this measure takes on a minimum value of zero when an opposition party did not submit any amendment proposals at all and—theoretically—has no upper bound, we turn to models for count data and estimate a negative binomial regression. Our dataset has a nested structure in which several amendments are nested in individual bills. Therefore, we started out with intercept-only regressions allowing for random intercepts at the bill level. Since we observe almost no variation over bills ($ICC < 0.02$), we present single-level regressions but report cluster-robust standard errors. Hence, our statistical models come down to

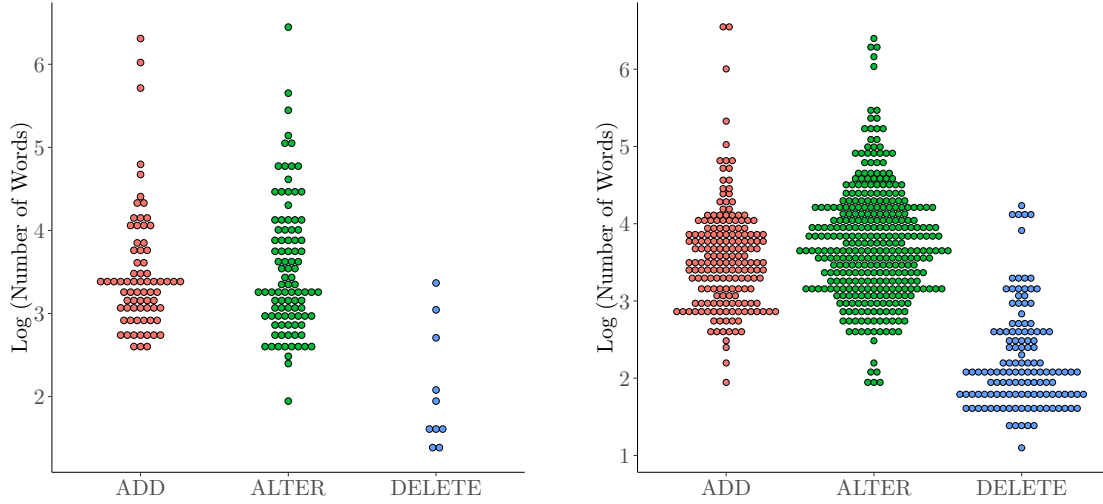
$$y_i = \beta_0 + \beta_1 \text{opposition amendment } t-1_i + \beta_2 \text{government amendment}_i + \beta_3 \log(\text{faction size})_i + \beta_4 \log(\text{date distance})_i + \beta_5 \text{opposition chair}_i + \beta_6 \log(\text{bill length})_i + \beta_{7-25} \text{policy field dummies}_i + \epsilon_i,$$

where $y_i = \text{opposition amendment}_i$ in the binary model and $y_i = \text{levenshtein distance}_i$ in the negative binomial regression.

Legislative review in the Landtag of Baden-Württemberg

Our analyses show robust support for both substantive hypotheses. We begin with a discussion of Hypothesis 1 focusing on the substance of opposition bargaining. Figure 4 plots the extent of all three types of propositions for bill development separately for coalition and opposition parties. As one can see, opposition review vastly outperforms the engagement of ruling parties after a bill has been introduced to parliament. It is important to note that both government as well as opposition parties often submit proposals that rewrite or add to original bill versions to a considerable extent. However, it becomes clear that for coalition parties, this is the predominant pattern as these aim to constructively work on legislation by rewriting parts of the proposed bill or proposing additional sections almost all of the time. With only 5.5% of all amendments proposing deletions, coalition members rarely aim to reduce parts of the original bill that stray away from the coalition compromise. First, this gives us some general insight into the patterns of *how* government parties actually police coalition compromises (Martin and Vanberg 2004, 2005). Second, when compared to coalition groups, opposition parties frequently try to torpedo proposed bills by deleting unfavored passages in their amendment proposals, as 19.8% of proposed opposition amendments aim at bill reduction. This signifies a pronounced difference in amendment strategy in line with our expectations ($p < 0.01$).

The main results from our regression models (Models 1 and 3) investigating Hypothesis 2 are presented in Table 2 (along with two additional model specifications that will be discussed subsequently). All models bear strong support for our expectations. In Model 1, competing opposition amendments at time point $t - 1$ show a robust positive effect on other opposition parties becoming engaged in government bill review—if a competing opposition party submitted an amendment proposal to a government bill, this increases the probability of other opposition parties filing at least one amendment proposal as well. Holding all other covariates fixed at their observed values, setting all values of our



(a) Proposed amendments from coalition parties. (b) Proposed amendments from opposition parties.

Figure 4: The substance of legislative bargaining in the Landtag of Baden-Württemberg, 2006-2018.

main variable of interest to 0 and 1 respectively yields a 18% (95% CI [6%, 30%]) difference in predicted probabilities to amend. Since the baseline probability for an opposition party to file an amendment at all is 14% (see Table 1), this difference in predicted probabilities is a highly relevant effect.

The effect of competing opposition amendments is robust when explaining the *extent* of legislative review. In our negative binomial regression presented in Model 3, the dependent variable is the logged word distance between the original government bill and the reworked manuscript if all opposition amendments are implemented. We see that competing opposition proposals at $t - 1$ do not only affect other opposition parties in their submission of amendments, but further in the extent with which the original government bill is scrutinized. If opposition competitors engaged, the expected logged word distance between government bills and opposition’s review increases by 1.776 ($p \leq 0.05$).

Models 1 and 3 provide strong evidence for Hypothesis 2 and support our central argument that part of opposition’s review of government can actually be explained by intra-opposition dynamics. Rather than following a clear government-opposition divide, this suggests that opposition parties use government review for intra-opposition position taking where influencing the substance of a bill is not the prime consideration. Rather, opposition parties might scrutinize government bills to delimit themselves from competing opposition factions rather than the bill author itself.

The substantive conclusion of our main result may be challenged by a scenario in which opposition amendments globally vary over different types of government bills. In this vein, several types of government bills might not experience any oppositional amendment action while other types of bills activate all parties across the opposition benches *jointly*. Such joint mobilization might lead to an observed effect as documented here, while not being routed in intra-opposition dynamics.

Table 2: Main Model Results.

	<i>Dependent variable:</i>			
	Opposition amendment		Word distance	
	<i>Binary logistic</i>		<i>Negative binomial</i>	
	(1)	(2)	(3)	(4)
Competing opposition amendment t-1	1.131*** (0.336)	1.590*** (0.367)	1.776* (0.905)	1.967* (0.990)
Government amendment	0.770** (0.299)	1.097*** (0.314)	1.332 (0.734)	1.559* (0.765)
Government \times opposition amendment		-2.300* (0.928)		-3.919* (2.232)
Faction size	0.005 (0.006)	0.004 (0.006)	0.008 (0.012)	0.008 (0.012)
Log(Date distance)	0.107 (0.149)	0.123 (0.151)	0.035 (0.292)	0.047 (0.287)
Opposition chair committee	0.202 (0.245)	0.163 (0.248)	0.840 (0.498)	0.891 (0.490)
Log(bill length)	0.110 (0.141)	0.116 (0.141)	0.051 (0.305)	0.016 (0.299)
Constant	-2.296 (1.330)	-2.465 (1.357)	2.448 (3.244)	2.546 (3.186)
Observations	679	679	679	679
Log Likelihood	-262.310	-258.685	-850.898	-850.323
Akaike Inf. Crit.	576.620	571.369	1,753.795	1,754.647

*Note: All models include dummy variables for 20 distinct policy fields coded after the Comparative Amendments Project. * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.*

Figure 5 plots the predicted probabilities to amend for the two respective groups against the length of the government bill that was revised. From this plot, we can derive that differences are pronounced for bills of all complexity, in contrary to a scenario in which all opposition parties simply simultaneously engage in complex bills whereas simplistic bills are jointly left untouched throughout the opposition

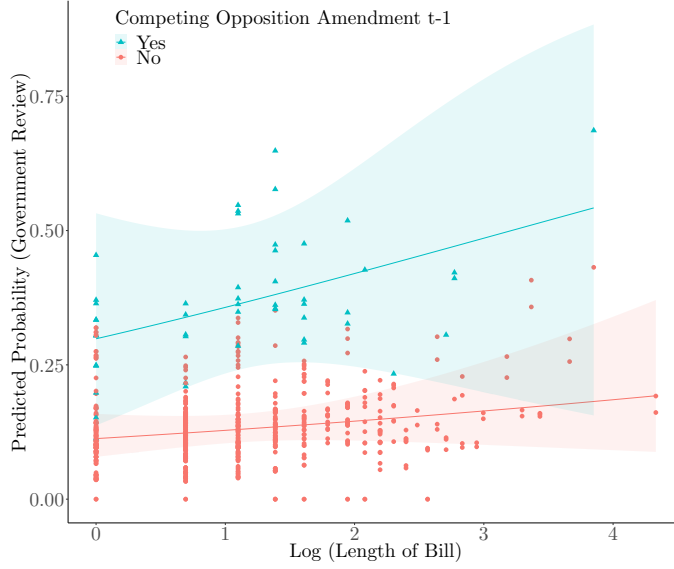


Figure 5: Predicted probability of opposition amendments based on Model 1.

benches. Figure 6 visualizes this effect for different bill lengths and shows that differences in extents are pronounced for legislative proposals of all degrees of complexity as well.

We further validate our main result by quantifying it only for those bills for which the overall amendatory activity is low. It is a suitable assumption that controversial bills which trigger legislative review in general will do so both for opposition as well as for government parties. In general, no government amendments were observed for 88% of all analyzed bills. As a validation check, we isolate our main effect for these bills in which no coalition party became active in review and include an interaction effect with government review in Models 2 and 4. In these, our substantive effect of interest is still quantified by the main effect of competing opposition amendments, which grasps their influence only for those bills where no governing party engaged in bill review. For both model specifications, effects stay positive, are robust, and have even been suppressed when analyzing all bills jointly. These findings build further confidence in our main conclusion that we can find intra-opposition position taking in government review.

Conclusion

The process of formally drafting and submitting legislative amendments is generally viewed as resource-intensive and costly, as it requires staff and expertise that is in short supply for opposition parties. Moreover, research on competitive majoritarian systems shows that the vast majority of opposition amendments do not make it into substantive policy and is voted down in parliament. Against this backdrop, the extent with which opposition parties scrutinize government bills seems puzzling. The present work departed from this empirical puzzle and analyzed opposition engagement in legislative review from two different angles.

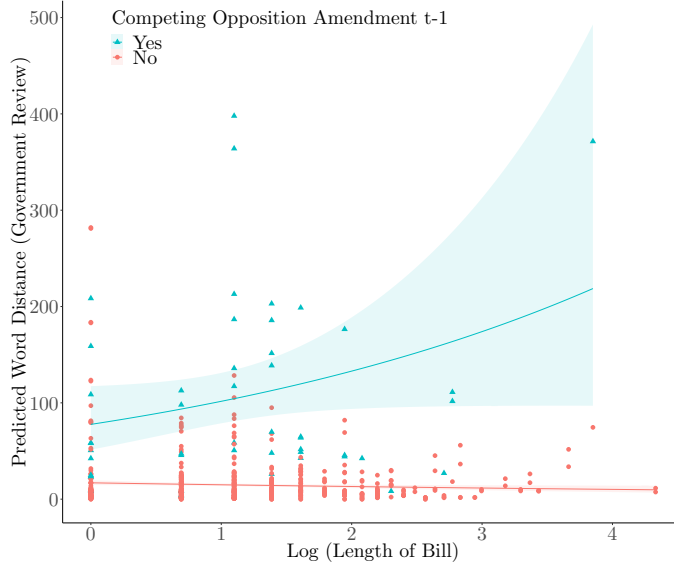


Figure 6: Predicted extent of opposition review based on Model 3.

First, we shed light on the substance of opposition review. We have argued in favor of a distinction between constructive and destructive amendment strategies in which constructive review implies actively adding to or rewriting proposed policy and destructive review relies on deleting original bill passages. From this distinction, we explained the *extent* of opposition amendments. While coalition parties submit few but cost-intensive amendment proposals rewriting original and proposing genuinely new policy sections, opposition groups can often circumvent these heavy resource investments and enable their extensive engagement by proposing to discard part of the coalition policy rather than adding to it.

Second, we studied the underlying motives for opposition review beyond the policy-seeking motivation to shape coalition output. Since all party groups find themselves in constant electoral competition, public position-taking is underlying parliamentary actions. We present evidence that opposition review of government parties incorporates mechanisms of intra-opposition position-taking. As opposition amendments trigger legislative review by other opposition groups, we show that opposition parties use their review of government bills to distinguish themselves from other opposition parties rather than from the bill author. This is a fascinating finding since opposition review of government bills is usually framed as following government-opposition interactions. By contrast, our analysis suggests that government-opposition interactions are partly driven by intra-opposition dynamics.

Our study adds to a growing literature that explicitly studies opposition strategies in parliamentary democracies (Andeweg 2013, Andeweg et al. 2008, De Giorgi and Marangoni 2015, Louwerse et al. 2017). As more and more European parliamentary arenas are described by competitive government-opposition interactions rather than by consensual patterns of policy-making (Andeweg et al. 2008), we deem it important to disentangle the motives and strategies of opposition parties in such settings. Additionally, this paper provides a methodological contribution that is applicable well beyond the study of the opposition. Several authors have prominently studied the legislative scrutiny of govern-

ment bills in coalition governments (Martin and Vanberg 2004, 2005, 2014, Dixon and Jones 2019, Fortunato et al. 2017, Pedrazzani and Zucchini 2013). These authors have operationalized parliamentary scrutiny through an analysis of all observed changes that were made to a bill throughout its legislative life cycle. Since this approach structurally neglects all submitted but unsuccessful amendments, counting up observed bill changes results in a loop-sided view on legislative bargaining even when studying intra-coalition interactions. We have derived an automated text analysis system that shows how this selection bias in the study of legislative bargaining can be circumvented by generating those bill versions that directly result from each individual amendment proposal. Possibly, this will drive future endeavors in the study of bill review beyond the substantive interest of this paper.

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