

Ivanusch, Christoph

**Article — Published Version**

## Issue Competition in Parliamentary Speeches? A Computer-based Content Analysis of Legislative Debates in the Austrian Nationalrat

Legislative Studies Quarterly

**Provided in Cooperation with:**

WZB Berlin Social Science Center

*Suggested Citation:* Ivanusch, Christoph (2024) : Issue Competition in Parliamentary Speeches? A Computer-based Content Analysis of Legislative Debates in the Austrian Nationalrat, Legislative Studies Quarterly, ISSN 1939-9162, Wiley, Hoboken, NJ, Vol. 49, Iss. 1, pp. 203-221, <https://doi.org/10.1111/lsq.12421>

This Version is available at:

<https://hdl.handle.net/10419/308655>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<http://creativecommons.org/licenses/by/4.0/>

CHRISTOPH IVANUSCH   
*Berlin Social Science Center (WZB)*

# *Issue Competition in Parliamentary Speeches? A Computer-based Content Analysis of Legislative Debates in the Austrian Nationalrat*

Parliamentary speeches are an important communication channel for political parties. A growing amount of literature suggests that parties use them to send policy signals in party competition. Although this perspective has become more popular in the literature, there is a lack of studies that focus on issue competition. I take a step towards closing this research gap by using a text-as-data approach to analyze parliamentary speeches in the Austrian Nationalrat. The data set consists of more than 56,700 speeches given by MPs between 2002 and 2019. I apply a semi-supervised technique to classify the speeches at sentence level into 20 issue categories. The analysis shows that, despite the constraining parliamentary context (e.g., legislative agenda), parties put comparatively strong emphasis on their issue preferences. The magnitude of this effect, however, depends on a party's legislative agenda-setting power. These findings confirm the presence and specific nature of issue competition in parliamentary speeches.

Academic interest in parliamentary speeches has grown significantly in recent years. This increased scholarly attention has broadened the view on the functions of parliamentary speeches. They are no longer seen only as an instrument to persuade other MPs and to increase the legitimacy of decision making, but are now also seen as a tool to send policy signals in party competition (Bächtiger 2014; Bäck and Debus 2016; Debus and Tosun 2021; Proksch and Slapin 2012, 2015).

LEGISLATIVE STUDIES QUARTERLY, 49, 1, February 2024  
DOI: 10.1111/lsq.12421

© 2023 The Author. *Legislative Studies Quarterly* published by Wiley Periodicals LLC on behalf of Washington University in St. Louis.

This is an open access article under the terms of the [Creative Commons Attribution](#) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

One of the most important aspects in party competition is issue competition. Which issues are important in the political debate can have a profound effect on policymaking (e.g., Green-Pedersen and Walgrave 2014) and voting decisions (e.g., Alvarez and Nagler 1995; Green and Hobolt 2008). Political parties have certain issue preferences—stemming from vote-seeking and policy-seeking—and compete to increase the salience of these issues in the political debate. In this way, they aim to dominate the political agenda (e.g., Budge and Farlie 1983; Green-Pedersen 2007; Petrocik 1996). Legislative debates, however, constitute a special environment. In contrast to largely unconstrained electoral competition (e.g., in manifestos), the parliamentary context strongly influences issue competition between parties. First, parliamentary debates revolve around bills and issues on the legislative agenda (Proksch and Slapin 2015). This limits the freedom of parties and their MPs to address issues of their choice. Second, parliamentary debates are marked by partisan control of the legislative agenda (Cox and McCubbins 2005). Government parties often have larger agenda-setting power in parliament and can shape the legislative agenda according to their own issue preferences (Döring 1995).

However, speeches also offer some room for maneuver. Although the legislative agenda puts an issue at the center of the debate, speakers can still focus on different aspects of it or link it with other issues by going “off-topic” or by applying framing. For example, although a parliamentary debate may revolve around tourism as an important economic sector, speakers may still address related issues by discussing the environmental consequences or labor-market implications of tourism.

Whether parties and their MPs use this room for maneuver in parliamentary speeches to focus on their issue preferences and engage in issue competition is, however, largely unclear. Although issue salience in the parliamentary arena receives an increasing amount of attention (e.g., Green and Jennings 2019; Meyer and Wagner 2021; Quinn et al. 2010), little research focuses on the dynamics of issue competition between political parties. Debus and Tosun (2021) take an important first step in this area by showing that green parties put more emphasis on issues related to the green agenda than other parties in parliamentary debates. This finding of a selective emphasis on issue preferences provides interesting insights, but the study also has two relevant limitations. First, the focus on a particular party family makes it difficult to generalize the results. Second, the authors do not analyze the speeches

themselves, but rather analyze the topic of the whole debate and then survey the MPs and parties who made speeches during this debate. Thus, evidence as to whether and to what extent parliamentary speeches are a tool for issue competition between parties is still limited.

In this article, I argue that issue competition is present in parliamentary debates, albeit influenced by the agenda-setting power of parties in parliament. I analyze more than 56,700 speeches made in the Austrian Nationalrat during the legislative periods 22–26 (December 20, 2002–October 22, 2019) and use a text-as-data approach (semi-supervised topic classification) to classify these speeches at sentence-level into 20 issue categories. Based on this classification, I measure to what extent and why issue agendas differ between parties in parliamentary speeches. The results show that, although parliamentary debates offer limited room for maneuver, parties still put relatively strong emphasis on their respective issue preferences. The magnitude of this effect is, however, influenced by a party's position in government or opposition. Overall, the results confirm that parties use parliamentary speeches to address issue preferences and thus engage in issue competition, albeit shaped by the specific context of legislative debates.

### **Issue Competition in Parliamentary Speeches**

As discussed above, parliamentary debates offer a specific context for issue competition between parties. The legislative agenda and partisan control over it influence the extent to which parties and their MPs can address specific issues. The nature of parliamentary speeches, however, still offers some room for maneuver as speakers can go “off-topic” or apply framing. I expect that parties use this degree of freedom to send signals in issue competition. Political parties have certain issue preferences and selectively emphasize these issues in their communication with the aim of dominating the political agenda (e.g., Budge and Farlie 1983; Green-Pedersen 2007; Petrocik 1996). Hence, even though the parliamentary context (e.g., legislative agenda) constrains parties, issue preferences should lead to differences in speechmaking between them. The issue preferences thereby stem from two main sources.

First of all, issue preferences of parties are closely related to vote-seeking and strategic considerations regarding issue

ownership. Issue ownership theory suggests that parties “own” certain issues, either because voters associate them with these issues or regard them as especially competent on them (Petrocik 1996; Walgrave, Lefevere, and Tresch 2012). Voters often resort to issue ownership evaluations (e.g., party competence) in their voting decisions, especially when they perceive an issue as important (Bélanger and Meguid 2008). This should incentivize parties to raise the salience of “owned” issues and communicate them comparatively often.

*H1: Issue ownership positively influences issue salience in parliamentary speeches.*

Second, issue preferences based on policy-seeking should influence party communication in parliamentary speeches. Some issues are more important to parties than others. While environmental issues are, for example, especially important for Green and Agrarian parties, law and order issues are particularly important for center-right parties (e.g., Green-Pedersen 2007). Parties aim to push these issues on the political agenda and thus increase attention to them. This is crucial as political attention to an issue is a precondition for political action and policy change (Green-Pedersen and Walgrave 2014). The relative importance of each issue for a party is most accurately represented in manifestos. Manifestos are negotiated at length inside parties and therefore offer a “uniquely representative and authoritative characterization of party policy at a given point in time” (Budge, Robertson, and Hearl 1987, 18). Thus, I expect the policy-seeking preferences set out in manifestos to be reflected in parliamentary speechmaking.

*H2: High issue salience in manifestos positively influences issue salience in parliamentary speeches.*

However, parliamentary debates are marked by partisan control over the legislative agenda (e.g., Cox and McCubbins 2005; Döring 1995). Hence, not every party is equally able to shape debates according to its preferences. Especially government parties have more influence on which issues are discussed in parliament. Thus, I expect that parties with larger legislative agenda-setting power (i.e., government parties) are able to address their issue preferences more strongly.

*H3: The influence of issue preferences on parliamentary speechmaking should be stronger for government parties than for opposition parties.*

### Data

This article analyzes parliamentary speeches in the Austrian Nationalrat between December 20, 2002 and October 22, 2019 (legislative periods 22–26). Austria is an ideal case to study potential issue competition in parliamentary speeches. First, it is a multi-party system with high levels of party unity. This is the case as parties strongly control candidate selection processes ahead of elections (Müller 2006) and the distribution of speaking time during legislative debates (Jenny and Müller 2001; Proksch and Slapin 2015). Second, parliamentary speeches are an important tool for political communication (e.g., Scheffbeck 2006). These factors represent a context that should favor issue competition between parties in parliamentary speeches.

Furthermore, the government–opposition dynamic in the Austrian parliament is well-suited to investigating potential effects of legislative agenda-setting power on issue competition. In recent decades, two parties have typically formed a coalition government, while two to four parties have been in opposition. In parliament, most debates are devoted to bills that originate from the government or MPs of the government parties. This allows government parties a high degree of control over the legislative agenda, but opposition parties also have some instruments to bring their issues to the floor. First, parties can make use of “urgent motions” and “urgent questions” to enforce a debate on an issue. Second, there are debates devoted to “topical issues” set aside in the parliamentary calendar, allowing each party group to propose an issue for discussion in a revolving system (Jenny and Müller 2021; Konrath 2017).

The full data set used in the article contains more than 56,700 speeches, which were held by MPs during the studied time period. The main data source is the ParlSpeech V2 data set by Rauh and Schwalbach (2020), which includes speeches until the end of 2018. To complete the data set for the entire 26th legislative periods, I collected the remaining speeches made between January 1, 2019 and October 22, 2019 via webscraping from the website of the Austrian parliament.

## Methodology

### *Classifying Parliamentary Speeches at Sentence Level*

To study this data set, I employ computer-based text analysis. Over the past years, several tools have been developed and applied to parliamentary speeches. Some well-known approaches estimate policy positions (e.g., Laver, Benoit, and Garry 2003; Slapin and Proksch 2008), while other recent approaches perform sentiment analysis (e.g., Proksch et al. 2019; Rudkowsky et al. 2018).

For the purpose of this article, it is necessary to detect issues within the speeches. Watanabe and Zhou (2022) propose a novel procedure for the creation of a seed-word dictionary and a semi-supervised topic classification approach, which they apply to speeches in the United Nations General Assembly. The classification results delivered by this approach clearly outperform other techniques such as simple dictionary analysis or (seeded) LDA (Watanabe and Zhou 2022) and has further advantages. First, semi-supervised approaches allow direct interpretation of the model output as categories are clearly defined by the seed-word dictionary. This is a big advantage compared to unsupervised topic models, which require ex-posterior interpretation of the model output and often produce topics that are inconsistent with the theoretical framework (Watanabe and Zhou 2022). Second, semi-supervised approaches are comparatively resource-efficient because they do not require extensive manually coded training data like fully supervised models. Therefore, I adapt and apply the semi-supervised approach proposed by Watanabe and Zhou (2022) to analyze parliamentary speeches in three steps.<sup>1</sup>

First, I preprocessed the text data with the R-package *quanteda* (Benoit et al. 2018). I divided the speeches into individual sentences as the classification is performed at the sentence level. I then tokenized the sentences and performed some basic preprocessing steps.

Second, I created a seed-word dictionary. To identify issue categories, I use the coding scheme of the Comparative Agendas Project (CAP) as a point of departure.<sup>2</sup> Parliamentary speeches, however, represent a specific context. Therefore, I adapted the issue categories to fit the domain- and country-specific context (e.g., adding categories “greeting” and “parliament” to capture



greetings and topics related to parliamentary procedures). After defining the issue categories, I identified relevant seed-words in a two-stage process as proposed by Watanabe and Zhou (2022). In the first step, I assigned knowledge-based seed-words to the issue categories. Here, significant domain- and country-specific knowledge was required to find suitable seed-words for each issue category. To complement and improve this knowledge-based dictionary, Watanabe and Zhou (2022) suggest adding frequent words to the dictionary in a second step. Therefore, I checked and tested the 1,500 most frequent words from the speeches for potential new seed-words to improve the dictionary.<sup>3</sup>

Finally, I performed the classification. The seed-word dictionary thereby functioned as input to a semi-supervised topic classification. I use the R-package *newsmap* (Watanabe 2018), which classifies the individual sentences into the defined issue categories. The model first identifies seed-words from the dictionary in individual sentences (keyword matching) and assigns topic labels to them. The model then estimates the association between the topics and textual features via the co-occurrence of words (dictionary-based learning). Based on this estimation, the model assigns topic labels to all sentences (Watanabe 2018). Additionally, I applied contextual smoothing to take contextual information from surrounding sentences into account during the classification process (for a similar application, see Watanabe and Zhou 2022).

To validate the classification, I use manual coding of 600 randomly sampled speeches as a “gold-standard”.<sup>4</sup> The classification approach applied in this article delivers a F1-score of 0.61.<sup>5</sup> This performance is comparable to results of similar advanced multi-category classification tasks (e.g., Osnabrügge et al. 2021; Watanabe and Zhou 2022) and therefore quite satisfactory.<sup>6</sup>

Overall, the applied technique, which was first proposed by Watanabe and Zhou (2022), delivers reliable results in a relatively resource-efficient manner. However, considerable domain- and country-specific knowledge is necessary to develop a suitable seed-word dictionary. The dictionary developed in this study is tailored to the specific case and vocabulary used in Austria and therefore cannot be directly transferred to other countries. This drawback poses hurdles for cross-country analysis, and several adjustments to the dictionary would even be necessary to fit it to the context of other German-speaking countries, for example.



*Measuring Issue Competition in Parliamentary Speeches*

Based on the hypotheses developed above, I study whether and to what extent party issue preferences in the form of issue ownership and manifesto salience drive issue communication in parliamentary speeches. The following sets of variables are used in the analysis.

The dependent variable is the variation in issue communication that can be observed in parliamentary speeches. Party agendas in parliament are comparatively similar because of the influence of the legislative agenda. This analysis focuses on factors that drive potential variation between parties in parliamentary speeches. Hence, it would not be meaningful to choose the simple party issue agenda as dependent variable since I would not be able to measure variation between parties. Instead, I use the measurement of *speech issue variation*. It is the variation in issue attention (%) for each party from the median of the issue attention for all parties during the respective legislative period.<sup>7</sup> This measurement represents how much more or less attention a party devotes to every single issue in comparison to the other parties during a legislative period. Hence, each issue per party and per legislative period is one observation.

Two independent variables are used to measure the effect of party issue preferences on *speech issue variation*. The first independent variable is *issue ownership* (IO). A party is assigned a value of 1 if the party owns the issue and 0 if it does not.<sup>8</sup> The AUTNES Panel Study 2017 (Wagner et al. 2018) provides data on issue ownership in Austria. Unfortunately, these types of data are only available for 2017. However, Seeberg (2017) shows that issue ownership is quite stable across time. Following this argument, the values provided by Wagner et al. (2018) can be used as a basis for the whole observational period. These data allow to identify ownership for the issues “agriculture,” “economy and energy,” “environment,” “immigration,” and “labor and welfare.” Thus, the variable *issue ownership* captures the one or two “core” issues of parties in Austria. However, this variable alone does not fully reflect issue preferences, as several issues (e.g., civil rights, culture, education) are not “owned” by a party. Therefore, another independent variable complements the analysis.

The second independent variable covers a broader understanding of issue preferences and is called *manifesto issue variation*. This variable reflects the relative importance of each individual

issue to a party and therefore its policy-seeking goals. It is calculated in a similar way as the dependent variable. The attention a party devotes to an issue in a manifesto is measured in percent. The *manifesto issue variation* is the variation in issue attention (%) for each party from the median of the issue attention for all parties in the same election year.<sup>9</sup> The resulting values indicate the importance of specific issues to a party compared to the other parties. In order to create this independent variable of *manifesto issue variation*, I have recoded the manifesto data set on Austrian parties provided by Müller et al. (2020) into the issue categories used in this study.

Additionally, I include interaction terms for *government participation*.<sup>10</sup> This variable captures agenda-setting power in the parliamentary context, which potentially influences issue communication of political parties, as postulated in H3.

## Results

Issue preferences in terms of issue ownership and manifesto communication are expected to influence parliamentary speeches at least to some extent. This should result in different issue agendas between the parties, with issue preferences being the driving factors.

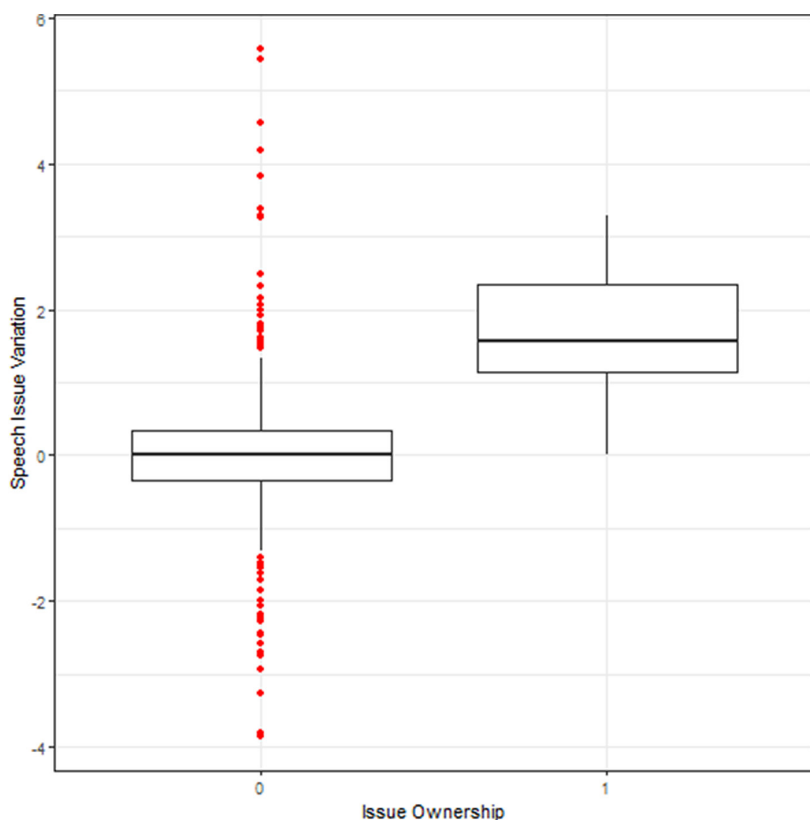
Table 1 shows the issue agendas of all parties (issue salience in percent) during the 25th legislative period (2013–17).<sup>11</sup> Although the parliamentary context limits parties' room for maneuver, it becomes clear that differences between the issue agendas exist. We can observe that the values for several issues differ substantially between parties. But are these differences down to issue preferences?

As introduced above, two independent variables represent party issue preferences, namely *issue ownership* and *manifesto issue variation*. Both are expected to drive issue communication in parliamentary speeches, as measured by the dependent variable *speech issue variation*. Figure 1 displays the potential effect of *issue ownership* on *speech issue variation* in a box plot; Figure 2 displays the potential effect of *manifesto issue variation* on *speech issue variation* (indicated by the blue regression line) in a scatter plot. Appendix G shows the same scatter plot as displayed in Figure 2 without the extreme outlier on the right-hand side at point (38/3.8). Both plots in Figure 1 and Figure 2 point to a positive relationship between the respective independent and dependent variable, indicating a

TABLE 1  
Party Issue Agendas (%) during the 25th Legislative Period

Issue	FPÖ	Grüne	NEOS	ÖVP	SPÖ	TS
Agriculture	4.66	3.35	1.87	6.35	3.48	9.52
Civil Rights	1.35	1.40	2.04	1.22	1.31	0.87
Culture	2.87	3.19	4.15	3.55	4.08	3.78
Defense	2.57	1.45	1.78	1.62	1.44	1.80
Economy & Energy	7.97	6.46	9.41	10.23	6.98	9.48
Education	6.53	7.47	8.56	6.27	7.62	5.80
Environment	1.77	5.59	2.30	2.93	3.14	3.30
EU & Foreign Affairs	9.38	10.51	9.49	8.58	9.22	7.79
Family & Youth	5.38	4.63	3.84	5.42	6.21	5.23
Finances	16.25	18.77	19.26	14.25	13.65	19.66
Health	4.56	3.39	3.58	4.79	4.68	5.03
Housing	1.01	1.57	1.00	1.04	1.51	0.94
Immigration	5.90	4.03	4.33	3.97	3.09	4.94
Judicial System	5.65	6.49	5.22	5.26	5.26	2.80
Labor & Welfare	10.90	8.24	12.99	11.08	13.70	10.42
Science	1.37	2.57	1.67	1.99	1.62	0.71
Security & Crime	5.82	4.03	3.29	5.05	5.18	3.69
Sports	0.55	0.64	0.35	0.65	0.74	0.65
Transportation	3.78	3.88	2.49	3.30	4.01	1.92
Women	1.72	2.33	2.36	2.43	3.09	1.69

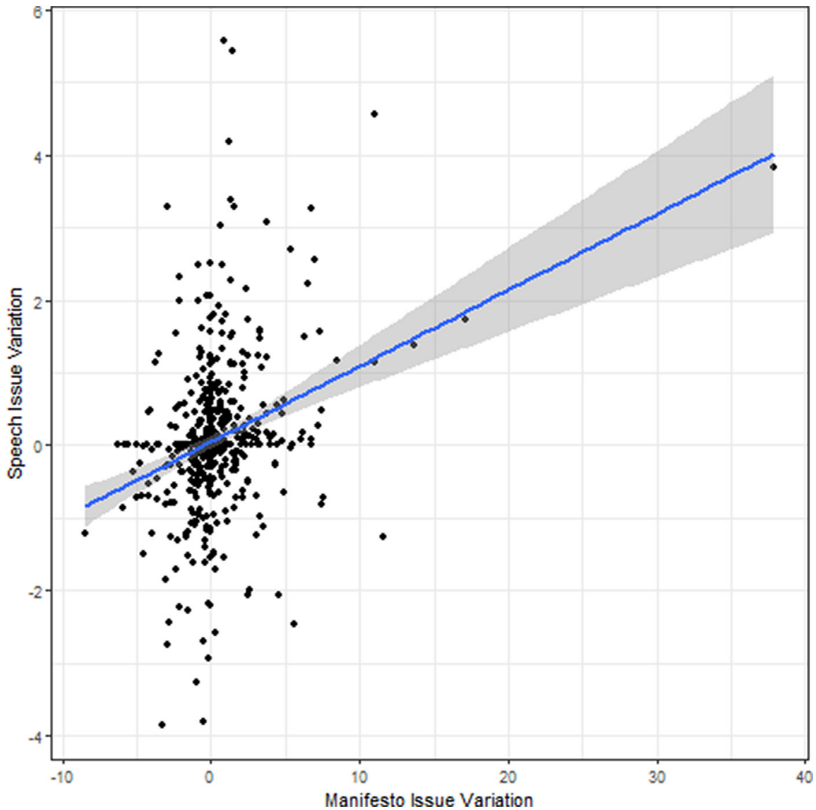
FIGURE 1  
Issue Ownership and Speech Issue Variation



potential influence of party issue preferences on the content of parliamentary speeches.

To test these observations statistically, I use the named variables as input to three separate regression models. In all three models, *speech issue variation* serves as the dependent variable. While the first and second model focus on the independent variables *issue ownership* and *manifesto issue variation* respectively, the third model includes both independent variables. Furthermore, each model includes interaction terms for government participation to account for potential interaction effects between issue preferences and legislative agenda-setting power. To account for the specific

FIGURE 2  
Manifesto Issue Variation and Speech Issue Variation



data structure (one observation = issue per party and per legislative period), I include clustered standard errors.<sup>12</sup>

The results deliver statistically significant positive effects for *issue ownership* and *manifesto issue variation* in all three models (see Table 2). Furthermore, the interaction terms show a stronger effect of *issue ownership* for government parties. However, no significant differences between government and opposition parties can be observed for *manifesto issue variation*. The first and second regression models explain around 12 and 9% of the variation in *speech issue variation* respectively. The third model explains nearly

TABLE 2  
Issue Preferences and Issue Communication in Austrian  
Parliamentary Speeches

	Speech Issue Variation		
	Model 1	Model 2	Model 3
Issue Ownership	1.463*** (0.213)		0.896*** (0.208)
Manifesto Issue Variation		0.106*** (0.019)	0.092*** (0.029)
Government Participation	-0.118 (0.183)	-0.005 (0.172)	-0.116 (0.172)
Issue Ownership:Government Participation	0.461*** (0.166)		0.978*** (0.210)
Manifesto Issue Variation:Government Participation		-0.005 (0.064)	-0.026 (0.072)
Constant	0.052 (0.088)	0.051 (0.074)	0.032 (0.076)
R <sup>2</sup>	0.120	0.092	0.179
Adj. R <sup>2</sup>	0.115	0.086	0.171
Num. obs.	500	500	500

\*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1.

Standard errors clustered by party, issue and legislative period.

18% of the variation. Hence, all three models deliver statistically significant results and have considerable explanatory power.

The presented results show that party issue preferences play a role when it comes to parliamentary speeches. Both *issue ownership* and *manifesto issue variation* explain the observed differences in issue salience between parties to significant degrees. Hence, parties put comparatively strong emphasis on their respective issue preferences in the form of issue ownership and manifesto salience, confirming hypotheses H1 and H2. The magnitude of these effects is thereby influenced by the legislative agenda-setting power of parties. Government participation enables a stronger focus on issue preferences, at least in the form of “owned” issues. This is, however, not the case for manifesto salience. Hence, legislative agenda-setting power appears to affect a party’s ability to address “owned” issues in parliamentary speeches, but not so much its ability to address issues that are important in the manifesto. These findings partially support hypothesis H3.

To sum up, we can observe differences in issue salience based on party preferences in parliamentary speeches. Parties use the limited room for maneuver in legislative debates to put comparatively strong emphasis on their issue preferences, albeit influenced by their respective legislative agenda-setting power.

### **Discussion and Conclusion**

There is a growing consensus in the literature that parliamentary speeches can function as a tool in party competition. However, a crucial concept in the area of party competition—namely issue competition—has been largely neglected so far. Hence, there is a lack of empirical evidence regarding the question of whether and to what extent parties engage in issue competition in parliamentary speeches.

This article has taken a first step to close this research gap by analyzing parliamentary speeches in the Austrian Nationalrat between 2002 and 2019. The results show that parties communicate different issue agendas in parliamentary speeches and that the observed variation is driven by issue preferences. Political parties and their MPs tend to talk more about “owned” issues and issues with a comparatively high salience in manifestos. The magnitude of this effect—at least for “owned” issues—is thereby influenced by a party’s legislative agenda-setting power. Thus, although the legislative agenda limits and guides issue communication in parliament, there is some room for maneuver. For example, parties and their MPs can frame issues differently in speeches or use parliamentary instruments (e.g., “urgent motions” and “urgent questions”) to highlight specific issues during debates. Overall, the results show the presence and specific nature of issue competition in parliamentary speeches.

The article contributes to our understanding of parliamentary speeches in two ways. First, it treats and analyzes parliamentary speeches in a similar way as other types of party communication (e.g., manifestos, press releases). Second, the empirical results confirm that parties use parliamentary speeches as a tool in party competition.

Parliamentary debates are at the heart of modern democracies. The presented results expand and strengthen our knowledge about the use and potential effects of parliamentary speeches. These insights can be crucial in order to understand dynamics within parliaments and the broader political system. However, the



article also has limitations. First, it analyzes a single case only and more studies are needed to make the findings more rigid. Second, the exact mechanism and further important dynamics in relation to issue competition in parliamentary speeches are not covered in this article. Future research should therefore focus more strongly on the underlying mechanisms of issue competition in legislative debates (e.g., framing) and investigate potential dynamics stemming from different phases of the electoral cycle (e.g., “routine times of politics” vs. “campaign times”).

*Acknowledgement.* “I wish to thank Jonathan Slapin and the anonymous reviewers for their comments and guidance. I am also very grateful to Marcelo Jenny, Marius Sältzer, Pola Lehmann, Lore Hayek, Kohei Watanabe and Robert Stelzle for helpful comments and support. Additionally, the paper was greatly improved by feedback from participants at the ECPR General Conference 2021 and a workshop at the University of Innsbruck.” Open Access funding enabled and organized by Projekt DEAL.

*Data Availability Statement.* The data that support the findings of this study are openly available in Harvard Dataverse at <https://doi.org/10.7910/DVN/YXXWQG>.

**Christoph Ivanusch** is a research fellow in the Horizon 2020 project “*OPTED Observatory for Political Texts in European Democracies*” at the WZB Berlin Social Science Center and a doctoral student in Political Science at the Berlin Graduate School of Social Sciences (BGSS), Humboldt-Universität zu Berlin.

## ENDNOTES

1. A detailed explanation of the procedure is provided in Appendix A.
2. The Comparative Agendas Project (CAP) provides documentation on its main website: <https://www.comparativeagendas.net/>. CAP has developed a codebook consisting of 21 major topics and issue categories (Bevan 2019).
3. The seed-word dictionary is available in Appendix B.
4. Coding instructions for manual coding and the codebook are available in Appendix C.
5. The F1-score is a regularly used accuracy measure in the field of computer-based text analysis (e.g., Watanabe and Zhou 2022). I report the micro-average F1-score. Further validation statistics per issue category are provided in Appendix D.

6. In their respective applications, Osnabrügge et al. (2021) achieve a F1-score of 0.54 (44 topics) and 0.64 (8 topics) on manifestos as well as 0.41 (44 topics) and 0.51 (8 topics) for parliamentary speeches; Watanabe and Zhou (2022) achieve a F1-score of 0.72 (6 topics) for UN speeches. The coding scheme used in this application consists of 22 topic categories (20 issues plus the additional categories “greeting” and “parliament”).

7. I use the median and not the mean because the latter is more strongly influenced by extreme values and outliers. Appendix I contains the same analysis as presented in Table 2, but calculated with mean values.

8. An explanation and overview of the values assigned to each party for *issue ownership* (IO) is presented in Appendix E.

9. For an explanation of the choice of the median, see footnote 7.

10. *Government participation* is measured in the following way: 0—no government participation during the legislative period; 0.5—temporary government participation during the legislative period, 1—government participation during the whole legislative period.

11. The issue agendas (%) for the other covered legislative periods (22, 23, 24, and 26) are given in Appendix F.

12. Appendices H, I and J contain robustness checks for the regression models reported in Table 2. Appendix H shows the regression model reported in the main article without the outlier at point (38/3.8). The model in Appendix I uses mean values to calculate the variables *speech issue variation* and *manifesto issue variation* instead of median values. Appendix J reports models that use alternative combinations of clustered standard errors and fixed effects to account for the data structure. The main findings remain largely stable across the different specifications.

## REFERENCES

- Alvarez, R. Michael, and Jonathan Nagler. 1995. “Economics, Issues and the Perot Candidacy: Voter Choice in the 1992 Presidential Election.” *American Journal of Political Science*: 714–44.
- Bächtiger, André. 2014. “Debate and Deliberation in Legislatures.” In *The Oxford Handbook of Legislative Studies*, eds Shane Martin, Thomas Saalfeld, and Kaare Strøm, 145–66. Oxford: Oxford University Press Oxford. <https://doi.org/10.1093/oxfordhb/9780199653010.013.0008>.
- Bäck, Hanna, and Marc Debus. 2016. *Political Parties, Parliaments and Legislative Speechmaking*. London: Palgrave Macmillan. <https://doi.org/10.1057/9781137484550>.
- Bélanger, Éric, and Bonnie M. Meguid. 2008. “Issue Salience, Issue Ownership, and Issue-based Vote Choice.” *Electoral Studies* 27(3): 477–91. <https://doi.org/10.1016/j.electstud.2008.01.001>.
- Benoit, Kenneth, Kohei Watanabe, Haiyan Wang, Paul Nulty, Adam Obeng, Stefan Müller, and Akitaka Matsuo. 2018. “Quanteda: An R Package

- for the Quantitative Analysis of Textual Data.” *Journal of Open Source Software* 3(30): 774. <https://doi.org/10.21105/joss.00774>.
- Bevan, Shaun. 2019. “Gone Fishing: The Creation of the Comparative Agendas Project Master Codebook.” In *Comparative Policy Agendas: Theory, Tools, Data*, eds Frank Baumgartner, Christian Breunig, and Emiliano Grossman, 17–34. Oxford: Oxford University Press.
- Budge, Ian, and Dennis J. Farlie. 1983. *Explaining and Predicting Elections: Issue Effects and Party Strategies in Twenty-three Democracies*. London: George Allen & Unwin.
- Budge, Ian, David Robertson, and Derek Hearl. 1987. *Ideology, Strategy and Party Change: Spatial Analyses of Post-War Election Programmes in 19 Democracies*. Cambridge: Cambridge University Press.
- Cox, Gary W., and Matthew D. McCubbins. 2005. *Setting the Agenda in the U.S. House of Representatives: Responsible Party Government*. New York: Cambridge University Press.
- Debus, Marc, and Jale Tosun. 2021. “The Manifestation of the Green Agenda: A Comparative Analysis of Parliamentary Debates.” *Environmental Politics*: 1–20. <https://doi.org/10.1080/09644016.2020.1864130>.
- Döring, Herbert. 1995. “Time as a Scarce Resource: Government Control of the Agenda.” In *Parliaments and Majority Rule in Western Europe*, ed. Herbert Döring, 223–46. Frankfurt: Campus.
- Green, Jane, and Sara B. Hobolt. 2008. “Owning the Issue Agenda: Party Strategies and Vote Choices in British Elections.” *Electoral Studies* 27(3): 460–76. <https://doi.org/10.1016/j.electstud.2008.02.003>.
- Green, Jane, and Will Jennings. 2019. “Party Reputations and Policy Priorities: How Issue Ownership Shapes Executive and Legislative Agendas.” *British Journal of Political Science* 49(2): 443–66. <https://doi.org/10.1017/S0007123416000636>.
- Green-Pedersen, Christoffer. 2007. “The Growing Importance of Issue Competition: The Changing Nature of Party Competition in Western Europe.” *Political Studies* 55(3): 607–28. <https://doi.org/10.1111/j.1467-9248.2007.00686.x>.
- Green-Pedersen, Christoffer, and Stefaan Walgrave. 2014. *Agenda Setting, Policies, and Political Systems: A Comparative Approach*. Chicago: The University of Chicago Press.
- Jenny, Marcelo, and Wolfgang C. Müller. 2001. “Die Arbeit im Parlament.” In *Die österreichischen Abgeordneten. Individuelle Präferenzen und Politisches Verhalten*, eds Wolfgang C. Müller, Marcelo Jenny, Barbara Steininger, Martin Dolezal, Wilfried Philipp, and Sabine Preisl-Westphal, 261–370. Wien: WUV Universitätsverlag.
- Jenny, Marcelo, and Wolfgang C. Müller. 2021. “Individual Talent, Official Functions, and Party Size.” In *The Politics of Legislative Debates*, eds Hanna Bäck, Marc Debus, and Jorge M. Fernandes, 152–74. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780198849063.003.0009>.

- Konrath, Christoph. 2017. "Parlamentarische Opposition in Österreich: Recht und Praxis in Zeiten eines fragmentierten Parteiensystems." *Zeitschrift für Parlamentsfragen* 48(3): 557–74.
- Laver, Michael, Kenneth Benoit, and John Garry. 2003. "Extracting Policy Positions from Political Texts Using Words as Data." *American Political Science Review* 311–31. <https://doi.org/10.1017/S0003055403000698>.
- Meyer, Thomas M., and Markus Wagner. 2021. "Issue Engagement Across Members of Parliament: The Role of Issue Specialization and Party Leadership." *Legislative Studies Quarterly* 46(3): 653–78. <https://doi.org/10.1111/lsq.12308>.
- Müller, Wolfgang C. 2006. "Parteiensystem: Rahmenbedingungen, Format und Mechanik des Parteienwettbewerbs." In *Politik in Österreich. Das Handbuch*, eds Herbert Dachs, Peter Gerlich, Helmut Kramer, Volkmar Lauber, Wolfgang C. Müller, and Emmerich Tálos, 279–304. Vienna: Manzsche Verlags- und Universitätsbuchhandlung.
- Müller, Wolfgang C., Anita Bodlos, Martin Dolezal, Nikolaus Eder, Laurenz Ennser-Jedenastik, Christina Gahn, Elisabeth Graf, Martin Haselmayer, Teresa Haudum, Lena Maria Huber, Matthias Kaltenegger, Thomas M. Meyer, Katrin Praprotnik, Anna Katharina Winkler, and Katharina Wurzer. 2020. *AUTNES Content Analysis of Party Manifestos: Cumulative File*, SUF ed.). AUSSDA. <https://doi.org/10.11587/DEHBL2>.
- Osnabrügge, Moritz, Elliott Ash, and Massimo Morelli. 2021. "Cross-Domain Topic Classification for Political Texts." *Political Analysis* 1–22. <https://doi.org/10.1017/pan.2021.37>.
- Petrocik, John R. 1996. "Issue Ownership in Presidential Elections, with a 1980 Case Study." *American Journal of Political Science*: 825–50.
- Proksch, Sven-Oliver, Will Lowe, Jens Wäckerle, and Stuart Soroka. 2019. "Multilingual Sentiment Analysis: A New Approach to Measuring Conflict in Legislative Speeches." *Legislative Studies Quarterly* 44(1): 97–131. <https://doi.org/10.1111/lsq.12218>.
- Proksch, Sven-Oliver, and Jonathan B. Slapin. 2012. "Institutional Foundations of Legislative Speech." *American Journal of Political Science* 56(3): 520–37. <https://doi.org/10.1111/j.1540-5907.2011.00565.x>.
- Proksch, Sven-Oliver, and Jonathan B. Slapin. 2015. *The Politics of Parliamentary Debate: Parties, Rebels, and Representation*. Cambridge University Press.
- Quinn, Kevin M., Burt L. Monroe, Michael Colaresi, Michael H. Crespín, and Dragomir R. Radev. 2010. "How to Analyze Political Attention with Minimal Assumptions and Costs." *American Journal of Political Science* 54(1): 209–28. <https://doi.org/10.1111/j.1540-5907.2009.00427.x>.
- Rauh, Christian, and Jan Schwalbach. 2020. *The ParlSpeech V2 Data Set: Full-Text Corpora of 6.3 Million Parliamentary Speeches in the Key Legislative Chambers of Nine Representative Democracies*. Harvard Dataverse. <https://doi.org/10.7910/DVN/L4OAKN>.
- Rudkowsky, Elena, Martin Haselmayer, Matthias Wastian, Marcelo Jenny, Štefan Emrich, and Michael Sedlmair. 2018. "More Than Bags of

- Words: Sentiment Analysis with Word Embeddings.” *Communication Methods and Measures* 12(2–3): 140–57. <https://doi.org/10.1080/19312458.2018.1455817>.
- Schefbeck, Günther. 2006. “Das Parlament.” In *Politik in Österreich. Das Handbuch*, eds Herbert Dachs, Peter Gerlich, Helmut Kramer, Volkmar Lauber, Wolfgang C. Müller, and Emmerich Tálos, 139–87. Vienna: Manzsche Verlags- und Universitätsbuchhandlung.
- Seeberg, Henrik Bech. 2017. “How Stable Is Political Parties’ Issue Ownership? A Cross-Time, Cross-National Analysis.” *Political Studies* 65(2): 475–92. <https://doi.org/10.1177/0032321716650224>.
- Slapin, Jonathan B., and Sven-Oliver Proksch. 2008. “A Scaling Model for Estimating Time-Series Party Positions from Texts.” *American Journal of Political Science* 52(3): 705–22. <https://doi.org/10.1111/j.1540-5907.2008.00338.x>.
- Wagner, Markus, Julian Aichholzer, Jakob-Moritz Eberl, Thomas M. Meyer, Nicolai Berk, Nico Büttner, Hajo Boomgaarden, Sylvia Kritzinger, and Wolfgang C. Müller. 2018. *AUTNES Online Panel Study 2017*, SUF ed. AUSSDA. [10.11587/I7QIYJ](https://doi.org/10.11587/I7QIYJ).
- Walgrave, Stefaan, Jonas Lefevere, and Anke Tresch. 2012. “The Associative Dimension of Issue Ownership.” *Public Opinion Quarterly* 76(4): 771–82. <https://doi.org/10.1093/poq/nfs023>.
- Watanabe, Kohei. 2018. “Newsmap.” *Digital Journalism* 6(3): 294–309. <https://doi.org/10.1080/21670811.2017.1293487>.
- Watanabe, Kohei, and Yuan Zhou. 2022. “Theory-Driven Analysis of Large Corpora: Semisupervised Topic Classification of the UN Speeches.” *Social Science Computer Review* 40(2): 346–66. <https://doi.org/10.1177/0894439320907027>.

### Supporting Information

Additional supporting information may be found in the online version of this article at the publisher’s web site:

Data S1

Figure S1.