

“Hier in diesem Hause sitzen keine Idioten!” — Emotion and Concreteness in Austrian Parliamentary Discourse

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Abstract

This study examines Austrian parliamentary discourse styles by combining utterances from the Corpus of Austrian Parliamentary Records (ParlAT; Wissik & Pirker, 2018) with a large dataset of affective norms for German (Köper & Schulte im Walde, 2016). The results suggest that parliamentary discourse styles differ significantly depending on gender, party affiliation and utterance type (regular speech vs. unauthorized utterances). The findings are discussed within the context of gendered language usage and the literature on political speech in general. In particular, we find evidence for a characteristically male right-wing populist mode of parliamentary discourse marked by negative and concrete language use and a penchant for heckling. It is also shown that discourse styles can vary over time, specifically when the parties in power change from one period to the next (e.g. a center-left/center-right coalition government following a center-right/right one).

1 Introduction and related research

Political discourse has proven a rich source for research in the humanities, the social sciences and beyond. Parliamentary discourse is often at the center of this research, as it ranks among the most prototypical and best-documented types of political speech. A growing number of machine-readable and annotated corpora of parliamentary proceedings have become available in recent years (e.g. Fišer et al., 2018: 1321; Ogrodniczuk et al., 2022), facilitating computer-based and specifically quantitative approaches. A number of initiatives and projects in the context of CLARIN are dedicated to the creation and analysis of parliamentary-based sources. These include the ParlaCLARIN recommendations for encoding parliamentary records (Erjavec & Pančur, 2021) and the multilingual comparative ParlaMint data set (Erjavec, Kopp, et al., 2023; Erjavec, Ogrodniczuk, et al., 2023).

The present study focuses on parliamentary discourse in Austria. The study is conducted within the CLARIAH-AT context, which forms part of the larger CLARIN enterprise. The aim of the study is to explore how lexical sentiment data (i.e. the emotional value and strength of words) and abstractness ratings may inform our understanding of parliamentary discourse in Austria. Specifically, we ask (a) to what degree language usage as defined by these metrics is related to factors such as gender, party membership and parliamentary role, (b) to what degree language usage is subject to change over time, and (c) whether usage differs in different utterances types, i.e. regular speeches (1) vs. unauthorized utterances (2), e.g. heckling:

(1) Abg. Dr. Josef Cap (SPÖ):

[...] Das ist die Strategie, die Sie haben, aber da machen Sie einen Fehler. Da machen Sie

einen schweren Fehler! [...] Hier in diesem Hause sitzen keine Idioten, und daher werden Sie hier immer wieder von uns vorgeführt werden für die Politik, für die Sie stehen. [...] [‘That is the strategy that you have, but you are making a mistake there. You are making a grave mistake. [...] There are no idiots sitting here in this House, and therefore you will be exposed for the politics that you stand for time and again. [...]’]

(XX, 181st sitting, 15 July 1999, p. 148)¹

(2) a. Abg. Mag. Karl Schweitzer (FPÖ):

Der Herr Bundeskanzler hat es schon eilig, Herr Kollege Cap!
[‘The Chancellor is in a hurry, dear colleague Cap!’]

(XX, 181st sitting, 15 July 1999, p. 148)²

b. Abg. Dr. Madeleine Petrovic (Grüne):

Das haben Sie verkürzt und falsch zitiert!
[‘You are quoting this in an abbreviated and misleading way!’]

(XXI, 9th sitting, 9 February 2000, p. 217)³

c. Abg. Rosemarie Bauer (ÖVP):

Aber geh!
[‘Come on!’]

(XX, 93rd sitting, 5 November 1997, p. 45)⁴

Sentiment analysis has been applied to parliamentary speeches before (e.g. Abercrombie & Batista-Navarro, 2020). However, few studies have integrated sentiment with abstractness scores in an attempt to profile linguistic usage more broadly. Studies on parliamentary discourse in the Austrian context are generally still rare (Haselmayer et al., 2022; but see Kern et al., 2021). We propose that a focus on sentiment and abstractness metrics could prove a valuable addition to existing methods for profiling political language and we demonstrate this in the Austrian case.

The remainder of this paper is structured as follows: The data and the method are discussed in Chapter 2. The results from the quantitative analysis are presented in Chapter 3 and discussed in relation with the relevant literature in Chapter 4. Chapter 5 concludes the paper with an outlook for future research.

2 Data and method of analysis

2.1 Corpus of Austrian Parliamentary Records

With the release of the ParlaMint 3.0 dataset (Erjavec, Kopp, et al., 2023), there is now a multilingual comparable corpus of parliamentary records from across Europe, which also contains Austrian data. The present study, however, makes use of a somewhat older data set with slightly different mark-up, called the Corpus of Austrian Parliamentary Records (ParLAT) (Wissik & Pirker, 2018). The corpus contains the

¹ 181st sitting of the National Council of the Republic of Austria, XXth legislative period, 15 July 1999, Shorthand Record, p. 148. https://www.parlament.gv.at/dokument/XX/NRSITZ/181/SEITE_0148.html

² 181st sitting of the National Council of the Republic of Austria, XXth legislative period, 15 July 1999, Shorthand Record, p. 148. https://www.parlament.gv.at/dokument/XX/NRSITZ/181/SEITE_0148.html

³ 9th sitting of the National Council of the Republic of Austria, XXIst legislative period, 9 February 2000, Shorthand Record, p. 217, 9 February 2000, p. 217. https://www.parlament.gv.at/dokument/XXI/NRSITZ/9/SEITE_0217.html

⁴ 93rd sitting of the National Council of the Republic of Austria, XXth legislative period, 5 November 1997, Shorthand Record, p. 45. https://www.parlament.gv.at/dokument/XX/NRSITZ/93/SEITE_0045.html

parliamentary records of the National Chamber (Nationalrat), one of two chambers of the Austrian parliament, from the XXth to the XXVth legislative periods, specifically the years between 1996 and 2017. This is a longer period than is available for most countries in ParlaMint, even though the version of ParlAT used here does not include the final years leading up to the present. ParlAT is based on official transcripts (produced from shorthand). Besides being tokenized, part-of-speech tagged and lemmatized, all speeches delivered by members of parliament are annotated as utterances and each speaker is identified and marked up, so that every utterance can be linked to a specific speaker. For each speaker, additional metadata is provided, including gender and party membership. One major advantage of ParlAT over ParlaMint is that verbal interruptions, like heckling or statements of approval, are annotated with the same amount of detail as regular speeches (Wissik, 2022), so that both types of parliamentary expression can be compared with regard to their usage. Other information provided by the stenographers, like applause, interruptions, descriptions of procedures, scenes or gestures, are annotated as notes. In its entirety, the corpus contains approximately 75 million tokens representing over 600 000 word forms and 400 000 lemmas.

2.2 Dictionary of German affective norms

The dictionary of German affective norms (Köper & Schulte im Walde, 2016) contains 350 000 German lemmas (including nouns, verbs, adjectives and adverbs), automatically rated by a supervised learning algorithm on four affective dimensions, namely valence, arousal, abstractness/concreteness, and imageability. Valence refers to the value of the emotional response elicited by a word, which can range from very positive to very negative (e.g. *Geschenk* ‘gift’ vs. *Strafe* ‘punishment’). Arousal describes the intensity of emotion provoked by a lexical stimulus (e.g. *ruhig* ‘calm’ vs. *gewalttätig* ‘violent’). Abstractness/concreteness measures the degree to which the concept denoted by a word is accessible to the human senses (e.g. *Ball* ‘ball’ vs. *Theorie* ‘theory’). Imageability refers to the degree to which concepts can be experienced through human vision (e.g. *Tisch* ‘table’ vs. *Glaube* ‘belief’) (Table 1).

Word	Valence	Arousal	Abstractness/ Concreteness	Imageability
<i>feiern</i> (‘celebrate’)	7.079	5.978	3.869	5.633
<i>erschießen</i> (‘shoot dead’)	1.257	8.946	5.955	7.31
<i>variieren</i> (‘vary’)	4.078	4.433	3.298	1.924
<i>vernachlässigen</i> (‘neglect’)	3.254	4.716	1.574	2.558

Table 1. Verb examples of the four affective norms (Köper & Schulte im Walde, 2016). Values range from 0 (lowest) to 10 (highest).

One major advantage of using this data set over others is its size, which the compilers achieved through propagation from human-rated seed words using deep-learning-based skip-gram embeddings (also known as word2vec, Mikolov et al., 2013). We are aware that this data set is not specifically tailored to Austrian German, but in the absence of a comparable and similarly comprehensive data set for Austrian usage we settled for it in the interest of maximizing coverage.

2.3 Data processing and method of analysis

A subcorpus including utterances by members of parliament (speeches and verbal interruptions) but excluding all procedural content (e.g. utterances by the chair) was compiled from the parliamentary

corpus. Procedural content only accounts for less than 10% of the whole corpus, so this did not reduce the amount of linguistic data much. All speaker variables, including speaker gender, party membership and parliamentary role (government vs. opposition), were linked directly to the utterances. A custom stopword list excluded function words, titles, recurrent phrases (e.g. *Bundeskanzler* 'Chancellor', *Hohes Haus* 'Parliament' [lit.: High House']) as well as party names and associated terms (e.g. *FPÖ* 'Freedom Party', *sozialdemokratisch* 'Social Democrat', *Volkspartei* 'People's Party'). The resultant utterance subcorpus was merged with the affective norms dictionary data set. Every word in the utterance subcorpus received a rating for each of the four dimensions arousal, valence, concreteness and imageability as long as an entry for the word existed in the dictionary. Since the affective norms dictionary is unique in its size and comprehensiveness, coverage was very good.

Compared to more sophisticated machine learning approaches for sentence sentiment classification, which typically only deal with one affective dimension (Haselmayer et al., 2022), analyses based on norms dictionaries is a relatively simple but also accessible and transparent method for investigating the relative impacts of a range of predictors. We do acknowledge the chosen method's likely limitations in terms of sentence classification accuracy, and accept this drawback in the interest of maximizing the breadth of affective dimensions covered. In the absence of a sufficient amount of labeled data for both sentiment and abstractness, resorting to existing lexicons is our best hope for capturing the effects of the predictors on these affective dimensions.

We opt for linear regression modeling to analyze these affective metrics. Arousal, valence, concreteness and imageability serve as dependent variables. The predictor variables include all collected speaker-related information, as well as utterance type (regular speech vs. unauthorized interruption) and legislative period. For analyzing utterance type as a dependent variable, we use binomial logistic regression, with the same set of predictors (minus utterance type itself). All calculations are carried out with R (R Core Team, 2023).

3 Results

3.1 Regular vs. unauthorized utterance types

The first set of results concerns the distribution of utterance types, operationalized here as the likelihood that a given utterance is unauthorized (e.g. heckling) or regular (i.e. parliamentary speeches). Since the output variable `UTTERANCE TYPE` is binary and categorical, the fitted model is a binomial regression model with four categorical predictor variables — `GENDER`, `PARTY`, `ROLE`, and `PERIOD` — added as main effects (Figure 1). The shaded areas in the graph represent 95% confidence intervals. If the confidence intervals of two values do not overlap, this can be interpreted as a significant difference.

The model reveals clear differences in the propensities to use unauthorized utterances in parliamentary sessions depending on all predictor variables. When converting the log odds ratio to simple odds, it emerges that an unauthorized utterance is about 1.5 times as likely to be uttered by a male member of parliament than a female one. Party affiliation also plays a significant role. It appears that the right-wing *FPÖ* and its short-lived spin-off *BZÖ* are the most likely to employ unauthorized utterances. In fact, their use of unauthorized utterances is about as frequent as their use of regular utterances. The Green Party, the liberal *LIF/NEOS* and the minor and short-lived *Team Stronach* are the least inclined to use unauthorized utterances, while the traditional center parties *SPÖ* and *ÖVP* are placed in the middle of this cline. The effect size is stark, with a given unauthorized utterance being three times more likely to be uttered by an *FPÖ* member than a *LIF/NEOS* member. As can be expected, members of the opposition use heckling and verbal applause to a higher degree and members of the government parties. Notably, the rate of unauthorized utterances reached its peak during parliamentary periods XXI and XXII, when the *FPÖ* (later as *BZÖ*) were in power as part of governing coalitions.

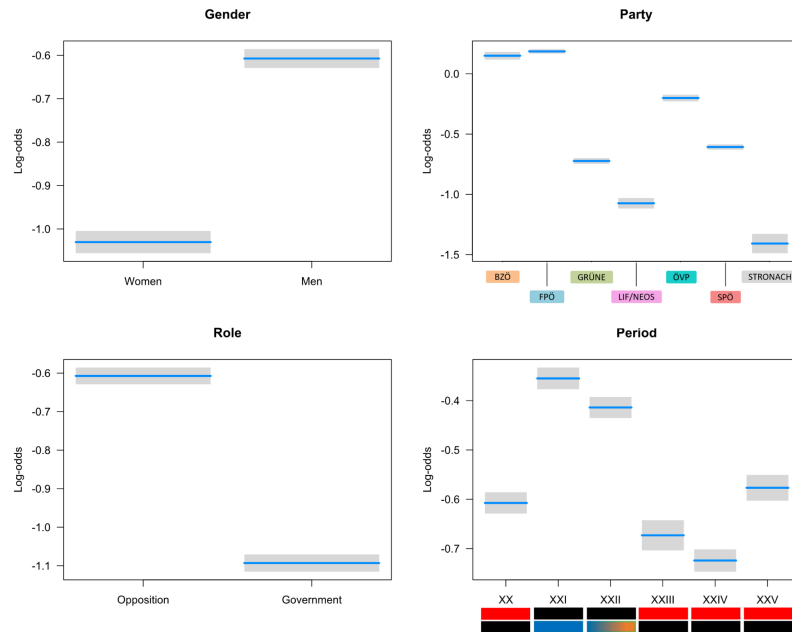


Figure 1. Effect of GENDER, PARTY, ROLE, and PERIOD on UTTERANCE TYPE. Shaded areas denote 95% confidence intervals.

3.2 Valence

Next, the first affective outcome variable to be examined is VALENCE, a metric that measures the degree of positive or negative connotation of words. VALENCE is a continuous variable, ranging from 0 (very negative) to 10 (very positive). Although VALENCE is thus bounded, few if any items actually hit the boundary values. The fitted model is therefore an ordinary linear regression model with the five categorical predictors — GENDER, PARTY, UTTERANCE TYPE, ROLE, and PERIOD — entered as main effects. To enhance comparability, the outcome is displayed as centered and scaled, that is, each element of the outcome variable is divided by the standard deviation and the mean is subtracted (Figure 2). The shaded areas in the graph once again represent 95% confidence intervals. Non-overlapping confidence intervals can be interpreted as a significant difference between two values.

Once again, all predictor variables have significant effects on the outcome. Thus, women generally use more positive language in parliament than their male colleagues. In terms of party affiliation, the right-wing FPÖ and the BZÖ once again stand out from the rest as the parties with the lowest valence values. In contrast, the most positive language is employed by the liberal NEOS, the center-right ÖVP, and the center-left SPÖ. The Green Party is positioned around the middle of the field. As may be expected, unauthorized speech is characterized by more negative language than authorized speech, and markedly so. The difference is the greatest between any two predictor values in the whole model, which suggests that most speech contributions of the unauthorized types can be classed as heckling rather than statements of approval. Government parties speak in more positive terms than opposition parties. Finally, it is interesting to see that valence was at its lowest point during the earliest two periods, particularly during the first right/center-right coalition, but pivoted towards more positive usage during the period that also saw the split within the right-wing FPÖ.

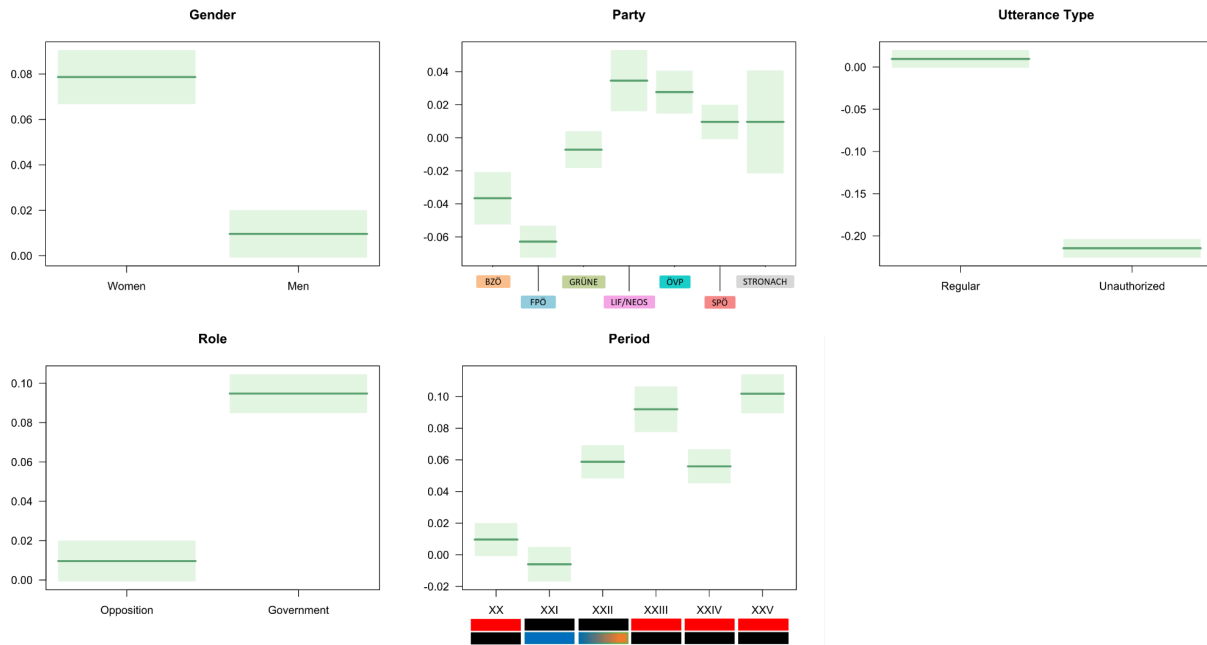


Figure 2. Effect of GENDER, PARTY, ROLE, PERIOD and UTTERANCE TYPE on VALENCE. Shaded areas denote 95% confidence intervals.

3.3 Arousal

The next affective outcome variable AROUSAL refers to the intensity of emotion associated with words. As with valence, we choose a linear model, with the same five predictors as main effects (Figure 3).

Women members of parliament seem to employ more arousing language than men. In terms of party affiliation, the different parties do for the most part not differ significantly from one another. It is worth pointing out, however, that the center-right ÖVP is situated at the lower end of the spectrum, while the FPÖ and NEOS are at the upper end. Unauthorized utterances are sharply more arousing than regular speech contributions. This is not surprising, given that the function of heckling and acclamations is to convey attitudes and positions in a succinct way without provoking a call to order from the chair for interrupting the current speaker. Regarding parliamentary role, members of government parties do use arousing speech to a slightly lower degree, even though this difference is not as marked as with valence before. Over the investigated period, language has generally become more arousing, specifically starting during parliamentary period XXI, that is, the time of the first right/center-right government coalition. It remained approximately at the same level after that.

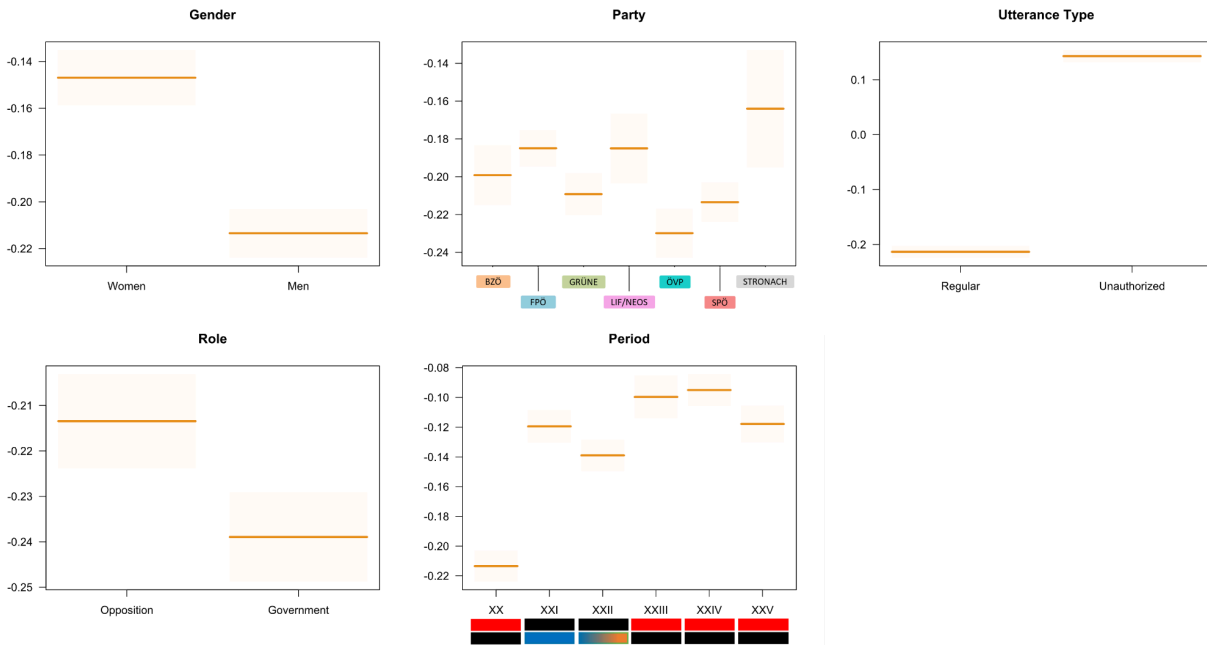


Figure 3. Effect of GENDER, PARTY, ROLE, PERIOD and UTTERANCE TYPE on AROUSAL. Shaded areas denote 95% confidence intervals.

3.4 Concreteness

Next, we turn to concreteness, a measure of how accessible the concept referenced by a word is to the five senses. The modeling procedure is the same as with the previous two outcome variables (Figure 4).

Men appear to use more concrete language, even though the difference is rather slight. More tellingly perhaps, it is once again members of the BZÖ and the FPÖ (and the short-lived Team Stronach) who employ the most concrete language, while the other end of the cline is again filled by the liberal NEOS party. The cleft between the two is striking. This is by far the predictor with the most pronounced difference between its extreme values in the whole model. The two center parties ÖVP and SPÖ are placed almost identically in a medial position of the spectrum, while the Green Party tends slightly more towards abstractness. With regard to the remaining predictors, regular speeches exhibit slightly more concrete language than unauthorized utterances and opposition parties tend to employ more concrete language. Over time, usage trended towards more abstract language.

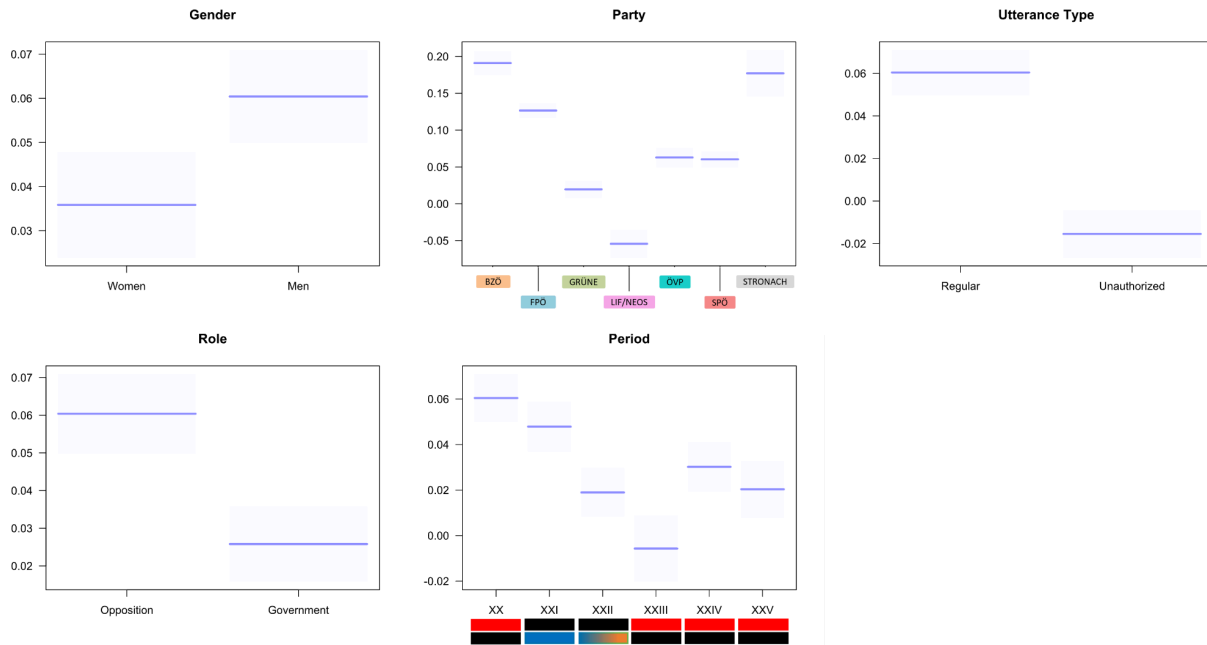


Figure 4. Effect of GENDER, PARTY, ROLE, PERIOD and UTTERANCE TYPE on CONCRETENESS. Shaded areas denote 95% confidence intervals.

3.5 Imageability

The final measure to be discussed is IMAGEABILITY (Figure 5). In contrast to CONCRETENESS, IMAGEABILITY specifically addresses the question how accessible a word's meaning is to the sense of vision, rather than all senses combined. The modeling procedure is the same as before.

It is obvious that CONCRETENESS and IMAGEABILITY behave in highly similar ways. However, the differences between predictor values with IMAGEABILITY as outcome variable are sometimes less pronounced compared to the model with CONCRETENESS as outcome variable. Regarding GENDER, for example, the estimate for men's speech does not emerge as significantly different from that for women's speech. The IMAGEABILITY estimates for the predictor PARTY are almost a mirror image of the CONCRETENESS estimates, with the right-wing parties at the high end and the liberal parties at the low end. The predictive behavior of parliamentary ROLE and PERIOD is also comparable to the CONCRETENESS model. The only predictor that behaves in a notably different way is UTTERANCE TYPE. Here the estimates for the predictor values are reversed, such that unauthorized speech is linked to higher imageability estimates than regular speeches.

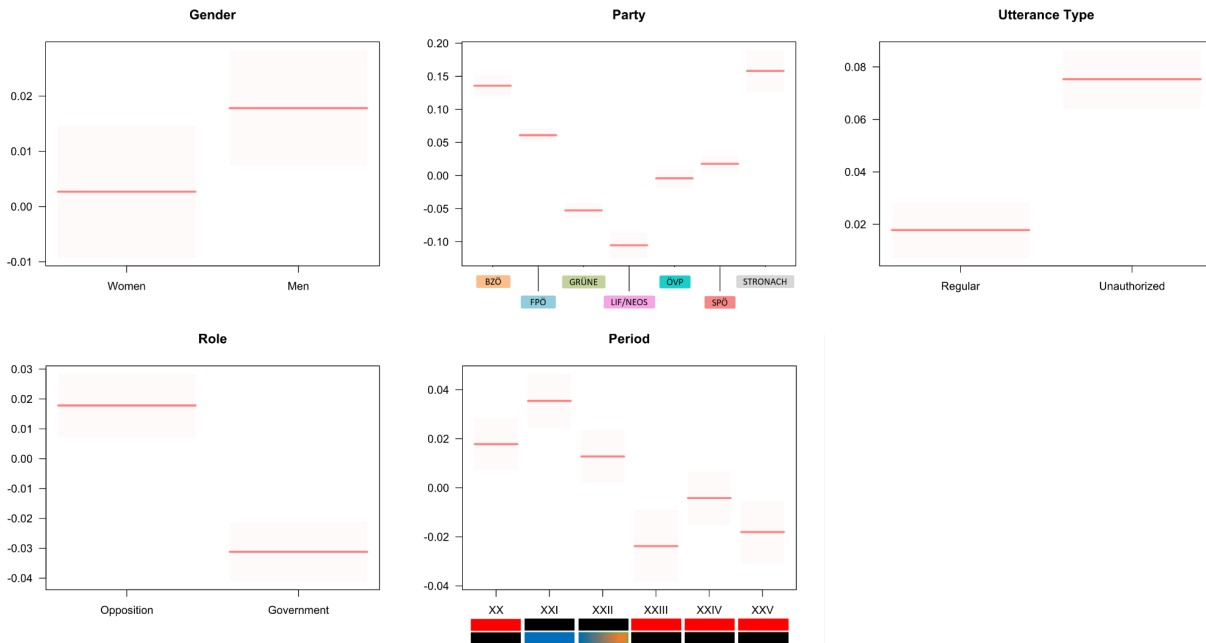


Figure 5. Effect of GENDER, PARTY, ROLE, PERIOD and UTTERANCE TYPE on IMAGEABILITY. Shaded areas denote 95% confidence intervals.

4 Discussion

Our results point to marked differences in language use across all investigated variables. In line with previous research on gendered language usage, female members of the Austrian parliament generally display more positive (Haselmayer et al., 2022; cf. Mehl & Pennebaker, 2003) and more arousing (Thomson & Murachver, 2001) language compared to their male colleagues. An oft-repeated explanation for the reported bias towards positivity is that women typically assume less contrarian interactional roles than men, instead foregrounding co-operativeness and maintaining relationships, while male speech is typically geared towards competition and domination. This behavior is ultimately a function of internalized expectations of gender-congruous behavior derived from a binaristic conception of gender based on biological sex (Eagly & Karau, 2002). It has also been pointed out that any such effects should not be seen as deterministic, neither biologically nor socially, since they are often small and can be overridden by factors such as measurement context (Anderson & Leaper, 1998; Hyde, 2005). In the present study, gender effects also tend to be small, but significant. Whatever the origin of the gendered use of positive and arousing language, Austrian parliamentary discourse seems to be one context where these aforementioned generalizations hold. Gender also plays a role with regard to utterance type, with men accounting for a much larger share of unauthorized utterances like heckling. This matches previous results in the literature, where men are found to interrupt the speech of others more often than women, especially when the type of interruption can be classed as ‘intrusive’ (Anderson & Leaper, 1998).

Contrary to expectation, however, men display higher concreteness scores than women do. This does not straightforwardly match previous findings that men utilize abstract communication as a signal of power, impeding women’s chances to emerge as leaders (Joshi et al., 2020, 2021). At the same time, women’s tendency to discuss policies in more concrete terms has been suggested to carry potential for the political process as it may serve to communicate more effectively to the wider public (Hargrave & Langengen,

2021). While concreteness does not correlate with gender in the predicted way in the present study, it does exhibit significantly increased levels in the language of opposition parties compared to government parties. This points to another function of abstractness, namely to signal power by conveying the ability to grasp the bigger picture, think strategically, and distill the general from the specific (Palmeira, 2015; Wakslak et al., 2014), in other words: to be in control of things. It is therefore not surprising that members of government parties would shift towards more abstract speech patterns when they come into power. Neither is it surprising that government parties would use more positive and less arousing language, as their continued political success depends on communicating a sense of stability and achievement. However, it has also been observed that abstract language runs the danger of being perceived as lacking the initiative and the capability to implement projects (Palmeira, 2015).

A different way of looking at these results takes into account that emotion and abstractness also vary drastically with party affiliation. Thus, the male-dominated right-wing parties use concrete language to a larger degree than liberal parties, while the traditional center parties ÖVP and SPÖ are located in the middle of this continuum. Additionally, the right-wing parties set themselves apart by more negative language compared to other parties as well as relatively high arousal scores. Finally, it is also the right-wing parties which tend to employ interruptions much more often than other, particularly liberal parties. Taken together, these results seem to coalesce around a characteristically male right-wing populist mode of parliamentary discourse, defined by negative, arousing and concrete language with a penchant for unauthorized interruptions. It contrasts with a liberal mode, which is less concrete, more positive, and more likely to be transported through regular speeches rather than irregular ones.

Populism is a multifaceted notion and as such not easy to define (De Vreese et al., 2018), but an integral part of all shades of political populism is that it pitches ‘the people’ against ‘the elite’ (Mudde, 2007). It is often assumed that populist speech appeals to the general public by using “simple” language (Canovan, 1999; Moffitt & Tormey, 2014) or by “mimic[king] the language of ordinary citizens” (Martelli & Jaffrelot, 2023). However, simplicity as a linguistic criterion has proved difficult to detect when measured in terms of lexico-grammatical complexity in the speech of well-known populist leaders (McDonnell & Ondelli, 2022). Instead, concreteness, negative valence and high arousal may serve as a combination of metrics that better fits the impressionistic descriptions of populist language as ‘simple’ or ‘direct’. Thus, the intended effect of employing this kind of language may primarily be to draw a stark contrast between the populist parties and the more abstract and positive diction of the establishment, which is thereby made to seem aloof and inert. Heckling of regular speeches further heightens the effect of resistance against an established order. It is worth noting that right-wing populist speech defined in these terms does not have a clear equivalent on the left. Either the language of left populism has different characteristics or there is no political group in the Austrian parliament that fills that end of the rhetorical spectrum.

It is perhaps telling that many of the larger diachronic shifts that we observe in the data happened at the start, during, or right after the two legislative periods when a right-wing party participated in a right/center-right coalition government. Valence shifted from its lowest levels to more positive language, arousal jumped, and concreteness started a slow descent towards relatively more abstract language. This may be a consequence of right-wing parties finding themselves in a position of power, which does not naturally fit their anti-establishment rhetoric. This may have led to a recalibration of discourse tactics towards a more moderate style. On the other hand, interruptions still peaked at the end of this time, which may reflect a generally tumultuous parliament during the XXIst and XXIInd periods, with liberal and center parties partly adopting this aspect of populist speech.

5 Conclusion and future work

We hope to have demonstrated that analyzing parliamentary speech through a combination of sentiment and abstractness metrics while also distinguishing between regular and unauthorized speech can provide valuable insights into how language is used strategically in parliament. We have also demonstrated how these metrics can be used to profile the speech of different kinds of actors in parliament, variably defined by their gender, party affiliation and parliamentary roles. We have argued for a characteristically male, right-wing mode of parliamentary expression, defined by low valence, relatively high arousal, and high concreteness/imageability coupled with a strong inclination for verbal interruptions, particularly heckling.

Using existing sentiment and abstractness lexicons is an intuitive and accessible way to approach these questions. One drawback of our approach, however, is that such lexicons classify each lexical item individually rather than utterances as a whole. Thus, rhetorical practices like irony, which is not at all rare particularly in heckling, cannot be captured reliably by our method. There is a real possibility that our valence estimates may be underestimating the effective emotional content of such utterances.

There are numerous additional avenues for profiling language usage that can be explored in future work. For example, an additional way of analyzing the data would include interaction terms in the regression models. By controlling for party membership, for example, one could test the tentative conclusion that speech strategies become more moderated when parties change from an opposition to a government role. Interactions would also make it possible to tease apart the relative impact of gender and political affiliation on concreteness values to see whether male speech is indeed more concrete across the political spectrum, as the analysis has suggested, or whether this aspect varies across different parties. Also, the degree to which various policy domains or subject matters determine the affective import and abstractness of politicians' language was not systematically taken into account in our study. Subject matter could be controlled as a factor by integrating a topic modeling element in future research (cf. Skubic et al., 2022). In addition, diachronic trends may be examined further, for example, by investigating whether the observed general increase in valence and arousal might correlate with a changing demographic composition in the parliament itself, specifically through an increase in the relative number of female representatives. Finally, it will be interesting to see whether the generalizations derived from the Austrian data are mirrored in other countries all over Europe. The ParlaMint data set and diverse sentiment and abstractness lexicons (Brysbaert, Stevens, et al., 2014; Brysbaert, Warriner, et al., 2014; Stadthagen-Gonzalez et al., 2017) can assist in broadening the scope of this line of research.

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