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Negative Campaigning in the Austrian National Council – The
Influence of First and Second Order Elections on the Strategic
Use of Negative Campaigning in Parliamentary Debates

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Abstract

Parliamentary debates are strategically used by parties to communicate their beliefs to voters (Proksch and Slapin 2014). It is argued in this thesis that, in addition to advertising for their party, MPs also engage in negative campaigning in parliamentary speeches: they spread information to cast doubt on the suitability of political opponents for political office and to emphasise the superiority of their own party. In view of the detrimental effects of such methods on political culture and democracy discussed in the literature and the lack of research on negative campaigning in parliamentary debates, this study examines the use of such communication methods in parliamentary speeches. The influence of election campaigns and government formation processes is examined, which is of particular interest for federal states regarding the distribution of power between levels and the organisational structure of parties. This study therefore examines the question of how federal and state elections influence the use of negative campaigning by MPs in parliamentary debates. To answer the research question, rational choice theory (Shepsle 2010) is combined with explanatory approaches for the speaking behaviour of MPs (Bäck and Debus 2016; Proksch and Slapin 2014) and of election research (Golder et al. 2017). Expectations regarding the influence of election campaigns and government formation processes at national and sub-national level as well as factors influencing speech behaviour in national parliaments at individual, party and systemic level are derived from this. These expectations are tested using the example of Austria, an established federal state. For this purpose, protocols of the National Council from 2009 to 2019 are analysed, which are supplemented with information on members of the National Council as well as Austrian states and parties. By combining a dictionary approach (Haselmayer and Jenny 2017, 2020) with automated named entity recognition, 1.33 million sentences from 104,029 speeches by 432 speakers are analysed for negative campaigning. The data obtained is then analysed using a two-part model (Belotti et al. 2015). It is shown that members of the National Council do use negative campaigning in their speeches (7.05% of spoken sentences). Both national government formation processes and the incumbent status of the attacking party at national and sub-national level influence the use of negative campaigning in parliamentary debates.

Kurzfassung

Parlamentsdebatten werden von Parteien strategisch genutzt, um ihre Überzeugungen an Wähler:innen zu vermitteln (Proksch and Slapin 2014). In dieser Arbeit wird argumentiert, dass Abgeordnete in Parlamentsreden neben Werbung für ihre Partei auch *Negative Campaigning* betreiben: sie verbreiten Informationen, um Zweifel an der Eignung des politischen Gegners für politische Ämter zu streuen und die Überlegenheit der eigenen Partei zu betonen. Vor dem Hintergrund in der Literatur diskutierter schädlicher Auswirkungen solcher Methoden für politische Kultur und Demokratie sowie einer Forschungslücke zu *Negative Campaigning* in Parlamentsdebatten wird in diesem Beitrag die Anwendung solcher Kommunikationsmethoden in Parlamentsreden untersucht. Dabei wird der Einfluss von Wahlkämpfen und Regierungsbildungsprozessen geprüft, was für föderale Staaten mit Blick auf die Machtverteilung zwischen Ebenen sowie der Organisationsstruktur von Parteien von besonderem Interesse ist. In dieser Arbeit wird daher der Frage nachgegangen, wie Bundes- und Landtagswahlen den Einsatz von *Negative Campaigning* durch Abgeordnete in Parlamentsdebatten beeinflussen. Zur Beantwortung der Forschungsfrage wird die *Rational Choice* Theorie (Shepsle 2010) mit Erklärungsansätzen für das Redeverhalten von Abgeordneten (Bäck and Debus 2016; Proksch and Slapin 2014) und der Wahlforschung (Golder et al. 2017) kombiniert. Hieraus werden Erwartungen zum Einfluss von Wahlkämpfen und Regierungsbildungsprozessen auf nationaler wie sub-nationaler Ebene sowie Einflussfaktoren auf individueller, parteilicher und systemischer Ebene auf das Redeverhalten in nationalen Parlamenten abgeleitet. Diese Erwartungen werden am Beispiel Österreich, ein etablierter föderaler Staat, getestet. Untersucht werden hierfür Protokolle des Nationalrats von 2009 bis 2019, welche mit Informationen über Nationalratsabgeordnete sowie österreichische Länder und Parteien ergänzt werden. Durch die Kombination eines Wörterbuchansatzes (Haselmayer und Jenny 2017, 2020) mit einer automatisierten Namenserkennung werden 1.33 Millionen Sätze aus 104,029 Reden von 432 Redner:innen auf *Negative Campaigning* untersucht. Anschließend werden die gewonnenen Daten mittels eines *Two-Part* Modells (Belotti et al. 2015) analysiert. Es zeigt sich, dass Abgeordnete des Nationalrats in ihren Reden durchaus auf *Negative Campaigning* (7.05% der gesprochenen Sätze) zurückgreifen. Dabei beeinflussen sowohl nationale Regierungsbildungsprozesse wie auch der Amtsinhaberstatus der angreifenden Partei auf nationaler und sub-nationaler Ebene den Einsatz von *Negative Campaigning* in parlamentarischen Debatten.

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1. Introduction

Democracy thrives on communicative exchange and political debate. Parliaments provide a forum for this political exchange, where elected representatives debate policies (Proksch and Slapin 2014, 1). The public nature of these debates provides speakers with the opportunity to communicate their political convictions to voters, in addition to presenting their convictions to their colleagues (*ibid.*). Parliamentary debates are of electoral importance due to their publicity and are used strategically by the parties for this purpose. Following Proksch and Slapin (2014), parliamentary debates are understood in this study less as an attempt to win political discussions or to convince the other parties of one's own position, but rather as a communication channel to convey one's own convictions to the other MPs and the electorate.

In view of the electoral significance of debates (Proksch and Slapin 2014) and the permanence of election campaigns (Joathan and Lilleker 2023), this paper argues that parliamentary speeches are a site of election campaigns. Furthermore, it is argued that, just as during ordinary election campaigns, parties use strategic communication and campaign strategies in parliamentary debates to achieve their policy, office and vote objectives (Strøm and Müller 1999): in addition to presenting their personnel, their programme and their achievements (LeDuc, Niemi, and Norris 2002), which is commonly referred to as positive campaigning, parties also engage in negative campaigning. This means that they pass on information about their political opponents to spread doubts about their suitability for political office and to emphasise their own superiority. Such attacks vary in intensity, can target individuals as well as entire parties, and cover both issue and valence points (Walter and Nai 2015). Parties and their representatives use such strategies to ensure that the weaknesses of their opponents are exposed (Dolezal, Ennser-Jedenastik, and Müller 2017, 666), but also to increase their own visibility (e.g. Haselmayer, Wagner, and Meyer 2017), improve their own standing compared to their political opponents, mobilise supporters and increase voter turnout (e.g. Fridkin and Kenney 2008). However, these advantages go hand in hand with costs for the attacking party (Garramone 1984; Johnson-Cartee and Copeland 1991), as voters generally disapprove of negative campaigning (Roese and Sande 1993). The parties can also incur policy and office costs in later negotiations, as the attacked negotiating partner demands compensation for aggressive campaigning (Golder 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013). Negative campaigning then becomes a strategic decision (Lau and Pomper 2004; Riker 1996), whereby parties decide to attack a political opponent if the expected benefits outweigh the costs of the attack (Haselmayer 2019; Nai 2020; Walter and Nai 2015). Just as parties use

parliamentary speeches to promote themselves, I argue that they also use them for negative campaigning.

Negative campaigning is a constant companion of political debates and election campaigns: as early as 64 BC, Quintus Tullius Cicero advised his brother Marcus Tullius to resort to negative campaigning in his campaign for the election of consul by pointing out the sexual scandals, corruption and crimes of his political opponents (Cicero 2012, 79; Haselmayer 2019, 355). Despite the costs and uncertainties associated with the use of negative campaigning, this communication strategy has been used regularly ever since. The effects that such communication strategies have on the electorate, political culture and democracy as a whole are the subject of much debate in the research literature. The only consensus is that negative campaigning is neither inconsequential nor trivial (Fridkin and Kenney 2008; Lau, Sigelman, and Rovner 2007). The positive effects of negative campaigning are that such negative messages provide important and useful information for the electorate (Finkel and Geer 1998) and stimulate interest as well as voter turnout (Geer 2006). On the other hand, a variety of detrimental effects of such negative messages are pointed out. It is argued that negative campaigning lowers political mobilisation and voter turnout, both directly via a lowered reputation of the sponsor and target of a negative campaign message and indirectly via worsened beliefs about political effectiveness and trust in politics (Ansolabehere et al. 1994; Ansolabehere and Iyengar 1995; Brader 2005). Furthermore, such attacks are accused of fuelling cynicism towards politics (Cappella and Jamieson 1997; Dionne 2004), sabotaging campaign discourse (Jamieson 1992) and generally reducing interest in elections (Patterson 2003). This leads to a high level of apathy in the population towards politics and creates a gloomy public mood (Thorson et al. 2000; Yoon, Pinkleton, and Ko 2005), which can in turn lead to a general rejection of democratic institutions (Mutz and Reeves 2005).

Empirical studies provide different, sometimes contradictory results with regard to the accusations and praise of negative campaigning. Some studies argue against the demobilisation thesis, as previous findings attribute only minor significance to negative campaigning or are distorted by empirical inconsistencies (Finkel and Geer 1998; Jackson and Carsey 2007; Wattenberg and Briars 1999). This also applies to uncivil attacks that are perceived as unfair (Brooks and Geer 2007). However, there are slightly negative effects regarding the assessment of political efficiency, trust in the government and the public mood (Lau, Sigelman, and Rovner 2007). Besides, there do not appear to be any harmful effects on the political system as such (Lau et al. 1999). More nuanced studies find different results conditional on the type of attack, the target and sponsor of the attack as well as voter characteristics. For example, Kahn and

Kenney (1999) argue that attacks perceived as legitimate by the population have a positive effect on voter turnout, while harsh attacks have the opposite effect. In contrast, studies by Krupnikov and colleagues (2011; 2014) show that in certain constellations of voter and candidate party affiliation, the use of negative campaigning can reduce the likelihood of going to the polls. The demobilising effect of negative campaigning is also evident when a specific group of voters is targeted: a survey experiment from the USA shows that black people are less likely to vote if they are confronted with evidence of racism in their favoured party (Stout and Baker 2022).

In view of the discussed harmful and positive effects of negative campaigning, the importance of such methods in electoral decision-making (Galasso, Nannicini, and Nunnari 2023; Garzia and Ferreira da Silva 2021) as well as their effects on public opinion formation and political decision-making processes (Haselmayer 2019; Nai und Walter 2015), it is important to deepen our understanding of negative campaigning. This includes measuring and monitoring the use of negative campaigning in parliaments – one of the central pillars of political debate in modern democracies – and identifying explanatory factors. The study of federal systems in this context is particularly interesting and has been insufficiently analysed to date. Although only about 10% of all states are organised according to the federal principle (Krumm 2015, 1), they comprise 40% of the world's population. I argue that the distribution of power between national and sub-national levels as well as between sub-national units influences the speaking behaviour of parliamentarians at the national level, especially with regard to their attack behaviour. In addition, there are internal party dynamics in federal systems: parties operate at different levels – state and federal organisations – and have to adapt their strategies and messages accordingly (Sturm 2020, 130–43) to balance and satisfy their preferences. This is also reflected in the use of negative campaigning in parliamentary debates. Particularly relevant in this context are the influences of sub-national and national elections and the subsequent government formation processes. At these points, vote, office and policy preferences of the parties and their sub-organisations come to the fore and moderate speaking behaviour in parliaments. I will argue that these processes have a direct impact on the attack behaviour of MPs in parliaments.

This is in contrast to considerations on the order of importance of elections, whereby elections at the sub-national level are often referred to as second-order elections in contrast to elections at the national level (Reif and Schmitt 1980). It is argued that this ordering results from the ascribed limited effects of such second-order elections, which are directly focussed on a local arena and have only indirect significance for the higher level (*ibid.*, 8–9). Consequently, the influence of electoral arenas is primarily directed from the more powerful to the weaker, with

parties focussing primarily on first-order elections (Golder et al. 2017, 3–4). This paper challenges this claim and argues that elections at the sub-national level influence the strategic calculus of parties and thus also the speaking behaviour of MPs in national parliaments. This work thus joins a series of studies that oppose the claim that sub-national elections are subordinate and insignificant (Cutler 2008; Schakel 2018; Schakel and Jeffery 2013; Schakel and Romanova 2021).

Against the background of a lack of studies on the use of negative campaigning in parliamentary debates in federal countries, the considerations presented are analysed based on an exemplary case. In this study, speeches from the Austrian National Council – one of Austria’s two parliamentary chambers – are analysed. Austria is a representative of an established, cooperative federalism in which the influence of federal and state parliamentary elections on the speaking behaviour of parliamentarians can be examined. While sub-national elections in Austria are also referred to as second-order elections (Tenscher 2012), empirical studies cast doubt on such a categorisation (Abedi and Siaroff 1999; Pelinka and Rosenberger 2007, 238, 241; Umek 2022). Instead of focussing on debates in the Federal Council – the other parliamentary chamber in Austria – the analysis focuses on the National Council, due to its political supremacy (Praprotnik 2023), the availability of data and theoretical considerations regarding the re-election of MPs. Debates from the period from 2009 to 2019 are analysed, with 22 state parliamentary elections and three National Council elections falling within the period under investigation.

Austrian election campaigns and negative campaigning (in Austria also known as *Schmutzkübelkampagnen* or dirt bucket campaigns) are no strangers to each other: even in the early years of the Second Republic, the National Council election campaign was characterised by slogans of fear and attacks on opposing parties (Dolezal et al. 2014, 100; Hölzl 1974). This continues into the election campaigns of the 21st century, which are also characterised by a high degree of negative campaigning (Dolezal, Ennser-Jedenastik, and Müller 2015, 2016, 2017; Müller et al. 2014), which brought headlines such as ‘Triumph of negative campaigning’ (Hofer 2007) to the 2006 National Council elections. Another, more recent example has become known as the Silberstein affair: the political consultant Tal Silberstein, who was hired by the Austrian Social Democratic Party (SPÖ), had carried out hidden negative campaigning via social media with a team of the campaign office during the election campaign for the 2017 National Council elections (Berk, Eberl, and Partheymüller 2021).

While previous studies on the use of negative campaigning during day-to-day politics have been limited to analysing parliamentary question time (Poljak 2023b; Poljak and Walter 2023) and

government investiture debates (Curini and Martelli 2010) as well as surveys of politicians (Ketelaars 2019), it is largely unclear to what extent parties resort to negative campaigning in ordinary parliamentary debates and what factors influence this use. Although there are studies that examine the use of negativity (Haselmayer, Dingler, and Jenny 2022; Schwalbach 2022) and incivility (Jenny, Haselmayer, and Kapla 2021) in parliamentary debates, these do not consider the target of negativity. There is also no research to date that examines the influence of sub-national election campaigns and government formation processes on debates in national parliaments and, in particular, the use of negative campaigning. This leads to the research question that will be answered in this thesis: how do federal and state elections influence the use of negative campaigning by MPs in parliamentary debates? The aim of this thesis is to analyse the influence of sub-national and national election campaigns as well as subsequent government formation processes on the use of negative campaigning in parliamentary debates using the example of Austria. For this purpose, an automated recognition of political attacks in parliamentary transcripts will be developed in order to efficiently analyse large amounts of text data. This will lay the foundation for country studies of this kind and enable direct transfer to other German-speaking countries. This work thereby follows up on previous research on the use of negative campaigning in a parliamentary context and the explanatory role of the legislative cycle (Poljak 2023b; Poljak and Walter 2023).

To answer the research question, theoretical strands of the rational choice approaches and the strategic behaviour of parties (Shepsle 2010) are combined with theories on the speaking behaviour of MPs in parliaments (Bäck and Debus 2016; Proksch and Slapin 2014). This approach is then interwoven with a theoretical approach to multi-level electoral politics (Golder et al. 2017) to explain the influence of election campaigns and subsequent government formation processes at the national and sub-national level on parliamentary debates. Here, strong reference is made to the Austrian political system and the party organisation structure there. Empirically testable hypotheses are formulated regarding both the influence of election campaign periods and government formation processes at state and federal level. Finally, factors at the federal, state and individual levels are presented to explain the use of negative campaigning and corresponding hypotheses are formulated. These factors include the incumbency status of the sponsor and target of an attack – both at national and sub-national level –, the origin of the MPs and the mode of government formation at state level.

These hypotheses are tested on Austrian National Council debates taken from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a). This dataset contains annotated parliamentary speeches at sentence level from eight different European democracies, including

speeches from the National Council between 2009 and 2019. This data is combined with information from the Austrian states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), *Statistik Austria* (2023), the *Chapel Hill Expert Survey* (Jolly et al. 2022a) and the Austrian Parliamentary Directorate (Republic of Austria Parliamentary Directorate 2024a, 2024b). After cleaning the data, 1.33 million sentences from 104,029 speeches by 432 speakers from seven parties remain. To measure negative campaigning in the speeches analysed, a dictionary (Haselmayer and Jenny 2020), which contains the negativity of words, is used to automatically determine the negativity of the sentences (Haselmayer and Jenny 2017) and the parties and persons addressed are extracted using automated named entity recognition (K. Benoit, Matsuo, and Gruber 2023; Honnibal 2024). The data obtained in this way is analysed using a two-part model (Belotti et al. 2015), which is suitable for taking into account the unique data structure of the dependent variable.

The remainder of this thesis is structured as follows: the next chapter presents the theoretical foundations of this study. After a discussion of different definitional approaches, the definition of negative campaigning used throughout this thesis is presented, which summarises negative campaigning as a continuous, one-dimensional concept without differentiating between types. The above-mentioned theoretical strands are then presented and interwoven. Finally, hypotheses are formulated which are tested in the empirical part of the thesis. The third chapter presents the data used to test the formulated hypotheses. Furthermore, the operationalisation of the variables and methodology used are discussed and presented there. In particular, the two-part model used (Belotti et al. 2015) is introduced and the associated advantages and disadvantages are addressed. Chapter four then presents the results of the empirical analyses. Descriptive analyses and graphical representations provide an initial impression of the data set examined. Subsequently, several bi- and trivariate analyses provide preliminary results on the relationship between the independent variables investigated and the use of negative campaigning in parliamentary debates. Finally, the results of the multivariate model are reported and discussed. Finally, chapter five summarises the results of this work, answers the research question, addresses the limitations of the results and provides an outlook on subsequent research.

2. Theory

This chapter presents the theoretical framework of this thesis. Firstly, the concept of negative campaigning is discussed and defined. Secondly, the strategic dimension of negative campaigning is examined by explaining the reasons for its use by political parties and MPs, particularly during parliamentary debates. The focus is on various factors, including the role of national and state elections as well as subsequent government formation processes. To this end, considerations from election campaign research are combined with ideas from federalism research and party research. In addition, theoretical considerations from election campaign research are applied to the use of negative campaigning in parliamentary debates. Hypotheses are derived and formulated to test the theoretical considerations on empirical data.

2.1 What is negative campaigning?

To begin with, let us define negative campaigning. Depending on who you ask, you will get different answers to what negative campaigning is at its core (Johnson-Cartee and Copeland 1991; Swint 1998, 49). For instance, the understanding of voters differs greatly from that of politicians, campaigners and advisors (Surlin and Gordon 1977; Swint 1998). The meaning of negative campaigning is also contested in research and there are numerous attempts to summarise the concept (Lau et al. 1999; Lau, Sigelman, and Rovner 2007; Walter 2014b).¹ Difficulties arise due to the wide range of practices – from political mud-slinging to comparisons with political opponents – that are summarised under negative campaigning (Haselmayer 2019). Overall, a trend towards a dichotomous definition can be observed (Lau and Brown Rovner 2009, 289), which divides campaign messages into positive and negative ones without taking into account the type and intensity of the message. Proponents of such definitions emphasise the directional dimension of negative campaigning and define negative campaigning as an attack against a political opponent based on the opponent's political programme, values, record or character, rather than relying on their own programmes, values, record or character (W. L. Benoit 1999; Geer 2006; Lau and Pomper 2004, 4; Nai and Walter 2015, 12). What these definition attempts have in common is that negative campaigning is voluntarily presented information that is directed against a specific political opponent in order to sow doubt about the opponent's suitability for office and to emphasise one's own superiority (Geer 2006; Schweitzer 2010, 203). Negative campaigning is usually used in the context of election campaigns, whereby the senders of these messages are usually parties, represented by

¹ For an overview of different attempts to define negative campaigning, see Nai and Walter (2015, 11–12).

candidates and party members, who address opposing parties (Walter and van der Eijk 2019, 365). The audience of campaigns can vary, ranging from the entire electorate to social groups addressed through micro-targeting (Elmelund-Præstekær 2008). Lilleker provides such a directional definition and defines negative campaigning as:

“a communication tool that stresses the weaknesses in opponents’ arguments, behaviour, personality or credentials for government. It is linked to making attacks on electoral opponents, thus undermining the candidate or party, suggesting that the sponsor of the attack can do better” (Lilleker 2006, 127).

Evaluative definitions of negative campaigning are usually excluded from positivist empirical research to avoid measurement difficulties and maintain objectivity (Nai and Walter 2015, 12). An evaluative definition of negative campaigning does not categorise all criticism of political opponents as negative campaigning, but only those points that are considered unfair, dishonest, irrelevant or illegitimate (Jamieson 1992; Mayer 1996). It is argued that avoiding subjective, evaluative judgements of campaign messages maintains validity and reliability (Walter 2014b, 44; Walter and Vliegenthart 2010). The categorisation of positive and negative campaigning using an evaluative definition, in contrast, is subjective and dependent on current norms (Mark 2006).²

Directional definitions of negative campaigning have been criticised from various directions. For instance, it is emphasized that there is a discrepancy between the scientific and professional understanding of negative campaigning (Kahn and Kenney 1999; Swint 1998). Similarly, the understanding of academics, voters (Lau and Brown Rovner 2009, 290; Lipsitz and Geer 2017; Mattes and Redlawsk 2015; Mutz and Reeves 2005; Sigelman and Kugler 2003; Surlin and Gordon 1977) and observers (West 2017) differs. There are calls to overcome this conceptual disconnect and create a definition that is closer to the ideas of the voters and professionals (Lipsitz and Geer 2017; Mattes and Redlawsk 2015). However, it should be noted that the electorate’s assessment of negative campaigning differs greatly according to demographic (Lipsitz et al. 2005), psychological (Nai and Maier 2021), ideological (Haselmayer, Hirsch, and Jenny 2020) and political (Nai 2022) factors.

In view of the subtlety of the dichotomous definition, there are attempts to create subcategories of negative campaigning to overcome the lack of conceptual clarity (Fridkin and Kenney 2008; Jamieson 1992; Jamieson, Waldman, and Sherr 2000; Kahn and Kenney 1999; Kamber 1997;

² One objection to this point of view is that even directional, seemingly objective definitions have an evaluative core, as a distinction is generally made between attacks on and praise of the political opponent. Removing any evaluative dimension and equating negative campaigning with talking about the political opponent (Lau et al. 1999; Mattes and Redlawsk 2015, 6) – regardless of the content – oversimplifies the communication strategy under investigation and is contrary to the scientific objectives, e.g. when investigating the effects of negative campaigning.

Mayer 1996; Richardson Jr. 2008). Jamieson et al. (2000) call for a distinction between legitimate and illegitimate attacks as well as the introduction of a comparison category. In this way, the different effects that the subcategories have on voters should be reflected (Fridkin and Kenney 2008, 2011; Kahn and Kenney 1999). The refinement of the concept is countered by the fact that the more complicated the resulting category system, the more complicated it is to use and the less reliable are the results obtained (Lau and Brown Rovner 2009, 292). Furthermore, the introduction of evaluative categories is not expedient for the reasons mentioned above. Although the introduction of categories depending on the target of the attack – e.g. issue vs. trait attacks (Poljak and Walter 2023; Walter 2014b) – are determinants that influence the strategic calculations of parties (Poljak and Walter 2023), they are not an essential component of negative campaigning (Geer 2006).

Alternatively, it is proposed to think of negative campaigning on a continuum and to measure it gradually (Haselmayer 2019; Haselmayer and Jenny 2018, 2018; Rudkowsky et al. 2018), e.g. via sentiment analysis (B. Liu 2022). It is assumed here attacks differ in terms of their intensity, whereby what is perceived as negative is what is considered generally negative by the indirectly addressed audience: for example, so-called crowd-coding methods (K. Benoit et al. 2016) are used to create sentiment dictionaries on the basis of which large amounts of text can be analysed and even the intensity of negative sentiment can be determined (Haselmayer and Jenny 2018; Haselmayer, Wagner, and Meyer 2017; Rudkowsky et al. 2018). A refinement of the concept of negative campaigning is hoped to explain the ambiguous results in meta-studies on the effects of negative campaigning (Lau et al. 1999; Lau, Sigelman, and Rovner 2007), as, for example, only harsh attacks or uncivil campaigns depress attitudes towards democracy and politics (Brooks and Geer 2007; Fridkin and Kenney 2008, 2011; Mutz and Reeves 2005).

Against this background, I will now derive the definition of negative campaigning used in this thesis. The starting point is a directional definition of negative campaigning due to its widespread use (W. L. Benoit 1999; Geer 2006; Lau and Pomper 2004, 4; Nai and Walter 2015, 12) and the above-mentioned advantages regarding objectivity (Nai and Walter 2015, 12), validity and reliability (Walter 2014b, 44; Walter and Vliegenthart 2010). To overcome the under-complexity of previous definitions, negative attacks are conceptualised on a continuum (Haselmayer 2019; Haselmayer and Jenny 2018, 2018; Rudkowsky et al. 2018). The introduction of subcategories is omitted for the reasons stated above. In this study, negative campaigning is understood as information voluntarily provided by a party or its representatives that is directed at a specific political opponent, in order to cast doubt on the suitability of this opponent for office and to emphasise the own superiority. Attacks that fall under this concept

differ in their intensity of negativity. Everything that is perceived as generally negative by the indirectly addressed audience is understood as negative. In this way, the understanding of negative campaigning in research and the electorate should be harmonised.³

2.2 The strategic calculation behind negative campaigning

To theorise the use of negative campaigning in parliamentary debates, this subchapter addresses the strategic calculations of parties for the use of negative campaigning in election campaigns. These explanations are then combined with considerations by Proksch and Slapin (2012, 2014) on parliamentary speech behaviour in order to explain the use of negative campaigning in parliamentary debates. The strategic calculations of both parties and individual MPs are considered.

2.2.1 Why do parties go negative?

In research, the actions of parties are often analysed from a rational choice perspective (Shepsle 2010), particularly regarding their decision to make use of negative campaigning (Walter and Nai 2015). Within the rational choice theory, it is assumed that actors have preferences according to which they act and within which they can establish an order of priority (Shepsle 2010, 14–15). Since these preferences are generally hidden information, assumptions are made about them. For political parties, it is assumed that they pursue three goals: they want to win votes, gain office and realise their political ideas, in the following vote-seeking, office-seeking and policy-seeking (Strøm and Müller 1999).

However, parties do not operate in a vacuum, but are embedded in an environment characterised by a high degree of uncertainty; about how things work, the preferences of other actors and uncontrollable events. To fulfil their preferences and maximize their outcome, actors rely on set of limited instruments and resources. Due to external uncertainties, actors cannot predict the outcomes of their actions, but they do hold beliefs about these relationships. Within this way of thinking, a rational actor is an actor who chooses the instrument that she assumes will deliver the desired outcome (Shepsle 2010, 16–30).⁴

Within this theoretical framework, negative campaigning can be seen as an instrument with which parties try to fulfil their preferences, whereby there is uncertainty about the success of

³ As an alternative to negative campaigning, the following terms are used interchangeably in this thesis: attacking the political opponent, relying on political attacks and going negative.

⁴ These conceptions are refined by the concept of bounded rationality (Simon 1966), which describes that actors are not always able to fully consider all available information due to limited cognitive resources and information processing capabilities. They therefore make use of simplified heuristics and approximations that are necessary due to time and information limitations.

such political attacks.⁵ Negative campaigning becomes a strategic decision (Lau and Pomper 2004; Riker 1996): before parties decide to use negative campaigning, they conduct a cost-benefit analysis to estimate the potential costs and uncertain benefits (Haselmayer 2019; Nai 2020; Walter and Nai 2015). Costs can be incurred by the parties through backlash effects (Garramone 1984; Johnson-Cartee and Copeland 1991): as political attacks are generally unpopular and generate negative feelings towards the attacker, the attacking party may be penalised by the electorate (Roese and Sande 1993; Shapiro and Rieger 1992). Parties in multi-party systems can also incur office and policy costs, as they can be penalised in subsequent coalition negotiations due to their aggressive behaviour in the election campaign by negotiating partners who suffered attacks (Golder 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013).

On the benefits side, there are several possible advantages that can be achieved through negative campaigning. These include increasing publicity for the attacking party (Haselmayer, Wagner, and Meyer 2017; Mattes and Redlawsk 2015, 4–5; Pratto and John 1991; Schweitzer 2010), enhance one's own reputation compared to the political opponent, mobilise supporters and increase voter participation (Brians and Wattenberg 1996; Fridkin and Kenney 2008; Garramone 1984; Homer and Batra 1994). In addition, increasing mass media attention for the attacking party and distracting the public from unfavourable issues are among the objectives of negative campaigning (Mattes and Redlawsk 2015, 4; Schweitzer 2010, 203–4). In principle, these advantages enable parties to fulfil their policy, office and voting preferences using negative campaigning.

The fact that negative campaigning – in certain contexts – has advantages over emphasising one's own advantages results from the negativity bias in information processing: in general, individuals pay more attention to negative information (Pratto and John 1991; Rozin and Royzman 2001; S. N. Soroka 2014) and evaluate it more strongly than positive information (Baumeister et al. 2001; Ito et al. 1998). Besides, negative information tends to be remembered longer than positive information (Lau 1985). Also, judgements based on negative information are rated as more significant than those based on positive information (Cacioppo and Gardner 1999; Cobb and Kuklinski 1997; Fiske 1980; Hamilton and Zanna 1972). Thus, negativity in campaigns affects voting decisions (Fiorina and Shepsle 1989; Holbrook et al. 2001; Lau 1982) and political judgements (Redlawsk, Civettini, and Emmerson 2010).

⁵ For concrete models that explain the use of negative campaigning with bounded rational behaviour assumptions, see for example Skaperdas and Grofman (1995) or Song, Nyhuis and Boomgaarden (2019).

Parties decide to engage in negative campaigning when the assumed benefits exceed the potential costs (Haselmayer 2019, 361). The parties' calculations are influenced, among other things, by the electoral system within which they operate. In a two-party system, the parties' preferences for office and policy coincide with their preferences for votes: whoever wins the election wins office and can enforce policies. Winning the election becomes the sole objective of parties (Haselmayer 2019; Walter and van der Brug 2013). As an election campaign strategy, negative campaigning aims to deter risk-averse voters from voting for the political opponent by devaluing the political opponent (Skaperdas and Grofman 1995) and to mobilise one's own camp for the election (Ansolabehere et al. 1994; Lau 1985; Riker 1991, 1996) as well as to win over voters from the opposing camp (Mancini and Swanson 1996). In a two-party system, negative campaigning thus becomes an instrument that helps the attacking party to maximise its votes in a relative or absolute sense (Haselmayer 2019, 361).

Multi-party election campaigns change the cost-benefit analysis of the parties, as the risk and benefits of negative campaigning are altered (Elmelund-Præstekær 2008, 2010; Hansen and Pedersen 2008; Ridout and Walter 2015; Walter 2012; Walter, van der Brug, and van Praag 2014). While in a two-party system the electoral losses of the attacked party are the (relative) gains of the attacking party, this is not the case in a multi-party system, as voters can opt for a third party (Galasso, Nannicini, and Nunnari 2023; Haselmayer 2019, 363; Tillie 1995; Walter and van der Eijk 2019). While the benefits of negative campaigning are therefore shared between several parties, the costs are borne solely by the attacking party (Elmelund-Præstekær 2008; Hansen and Pedersen 2008). Moreover, parties in multi-party systems have to balance their voter, office and policy preferences (Walter and Nai 2015, 99): winning the most parliamentary seats in these electoral systems does not automatically mean fulfilling office and policy preferences, as it is the case in two-party systems. Instead, parties are dependent on coalitions and – in addition to backlash effects – have to worry about the potential costs in post-election negotiations (Elmelund-Præstekær 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013). In the case of an election campaign rich in negative campaigning, this can cause lasting damage to relations between feuding parties (Dodd and Schraufnagel 2012; Walter and van der Brug 2013; Walter, van der Brug, and van Praag 2014) and prevent coalitions between them (Kaid and Holtz-Bacha 2006; Sjöblom 1968). Empirical research confirms this consideration: for example, coalition partners tend to attack each other mildly in election campaigns without completely severing their ties (Haselmayer and Jenny 2018). The changed cost-benefit analysis in multi-party systems thus means that, overall, a smaller extent of negative campaigning can be expected in multi-party systems compared to two-party systems

(Walter and van der Brug 2013, 371), but with variation in the level of negative campaigning, e.g. depending on the fragmentation of the party system (Papp and Patkós 2019).

2.2.2 Parliamentary speeches and underlying strategic considerations

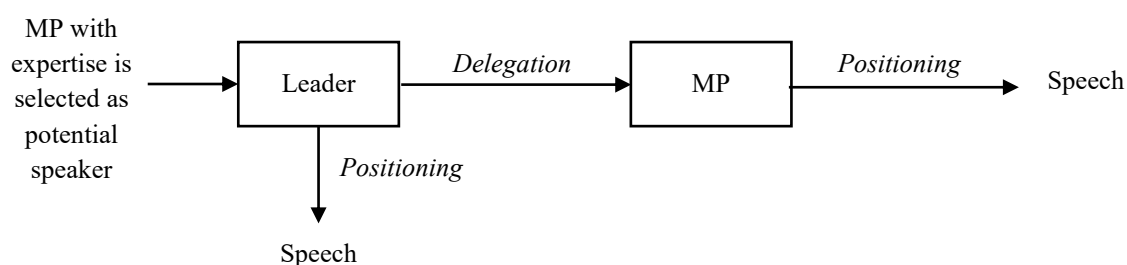
Now that the strategic calculation of parties has been presented, I turn to the strategic calculation of individual members of parliament. For this purpose, a rational choice approach by Proksch and Slapin (2012, 2014) on the speaking behaviour of MPs is used. The authors assume that parliamentary speeches are less of an instrument to influence policy outcomes and more of a communication tool between MPs, voters, and parties (Proksch and Slapin 2014, 41). With the help of speeches, MPs convey their convictions and those of their party to voters (Mayhew 1974; Proksch and Slapin 2012, 521) and try to influence them (Marcinkiewicz and Stegmaier 2019, 578). Speeches are understood as the result of strategic decisions by party leaders and MPs (Proksch and Slapin 2012, 520). In doing so, MPs and party leaders take into account their own and their party's vote-, office- and policy-seeking preferences (Kam 2009, 17; Proksch and Slapin 2012, 2014; Strøm and Müller 1999).

Two basic assumptions are made by the authors (2014, 24–25): first, political institutions – here primarily electoral systems, regime type and candidate selection mechanisms – influence legislative behaviour and therefore party unity (Bowler 2000; Carey 2007; Crisp et al. 2004; Huber 1996). Second, parties want to build a brand in order to communicate their core policy beliefs to the electorate and ultimately win votes. It is argued that due to limited resources, voters derive information about candidates and parties from such brands and base their voting on them (Aldrich 1995; Cox and McCubbins 2007; Downs 1957; Kiewiet and McCubbins 1991). Based on these two basic assumptions, Proksch and Slapin (2014, 25) argue that political institutions influence legislative behaviour because they create incentives for both party leaders and backbenchers with regard to intra-party disagreements. For example, majority voting systems create incentives for individual MPs to increase their name recognition (Maltzman and Sigelman 1996) to secure their own re-election (Carey and Shugart 1995). In contrast, the party leadership has incentives to give backbenchers free hand on the speaking stage (Proksch and Slapin 2014, chap. I.2).

To model the speaking behaviour of MPs, Proksch and Slapin (2012, 2014) design a delegation model of parliamentary speeches. They argue that speeches are the result of a delegation game played between party leaders and backbenchers (2014, 34). Through legal regulations, internal party rules and sanction mechanisms, the party leadership is able to control access to the speaking floor and the content of speeches to a large extent (*ibid.*, 34–35). The main features of

this model can be found in figure 2.1. After a member of parliament is recognised as a possible representative of the party on the platform, the party leadership decides whether to allow her to speak or to deliver the speech itself. If the speech is delegated to the MP, the MP must now decide which position the speech should promote: they can reflect the party leadership's convictions or deviate from them and present their own convictions. Both the party leadership's decision to delegate the speech and the choice of position to be conveyed are a function of ideology, electoral considerations and parliamentary institutions (Proksch and Slapin 2014, 35).⁶

Figure 2.1: Overview of the strategic delegation game of parliamentary speech



Source: Figure based on Proksch and Slapin (2014, 36), own illustration.

Notes: The illustration shows an overview of the strategic delegation game of the parliamentary speech. Once a potential speaker has been selected, the party leadership decides whether it will allow this MP to speak or whether it will speak on the issue itself. The outcome in both cases is a speech in parliament.

Due to their own convictions or the wishes of their electorate, it is argued that MPs' positions on certain issues differ from those of the party leadership (Proksch and Slapin 2014, 36). Like parties, MPs engage in vote-, office- and policy-seeking (Bäck and Debus 2016; Strøm and Müller 1999): they simultaneously strive to incorporate their convictions into policies, to secure and improve their political mandate as well as to be re-elected. Therefore, they engage in parliamentary activities (Fujimura 2016, 153–54). If the MP's position differs from that of the party leadership, the MP is forced to a trade-off: on the one hand, she is dependent on the party in terms of maintaining her mandate and career advancement and therefore wants to please the party leadership by conveying the party's line. On the other hand, she wants to adhere to her

⁶ In their theory on the behaviour of parliamentarians with regard to their decision to participate in debates and to deviate from the party line in terms of content, Bäck and Debus (2016) criticise this model. They argue that the approach presented by Proksch and Slapin focuses too strongly on vote-seeking and position-taking. Other factors, such as changes to the debated policies or norms, are ignored in their eyes. They also criticise the general under-complexity of the approach and the fact that a concrete weighting of the objectives is excluded. However, as this paper does not aim to present a complete model of parliamentary behaviour and primarily focuses on party objectives and their transfer to individual MPs, these points of criticism are of minor importance for this thesis.

policy convictions or those of her voters, possibly to secure her own re-election (Proksch and Slapin 2014, 36–37).

The party leadership's utility assessment differs from that of MPs in the set of preferences they seek to achieve. In addition to the goal of increasing the party's public visibility, party leaders want to maintain a clear party message (Arnold 1990; Cox and McCubbins 2007) and create strong internal party cohesion (Sjöblom 1968) to fulfil their vote-seeking preferences. Besides, the party leadership seeks to minimise party disunity to secure its own position (Luebbert 1986), get policies through parliament and form coalitions with other parties in order to win offices for the party (Bäck 2008). Since these goals are partly contradictory and parliamentary speaking time is a limited commodity (Cox 2006, 142), the party leadership is forced to make a trade-off (Proksch and Slapin 2014, 37). On the one hand, the party leadership has no interest in giving dissenting opinions a stage in a parliamentary speech, as intra-party disputes can damage the party's reputation, undermine the power of the party leadership, and send unclear signals to the electorate (Slapin and Proksch 2010). Ultimately, this leads to a loss of votes in the election. On the other hand, it is in the interest of the party leadership that their parliamentarians give speeches as policy experts. This can help to build and maintain the party's public profile but harbours the risk that the speaker will deviate from the party line and damage party unity (Proksch and Slapin 2014, 37–38).

As indicated above, the two authors argue that the specific behaviour of party leaders and individual MPs is mediated by systemic factors (Proksch and Slapin 2014, 43). In particular, the political and electoral system as well as the candidate selection mechanisms for parliamentary seats are such factors. Depending on the manifestation of these variables, different incentives arise for the political actors operating in the system and thus also expectations regarding the behaviour of parliamentarians (Proksch and Slapin 2014, chap. I.2). The specific design of these parameters in Austria and the effect on members of the National Council will be the subject of the next subchapter. Before we turn to this topic, we will look at the use of negative campaigning by parliamentarians in the next section.

2.2.3 Why do MPs go negative in parliamentary debates?

While attacks during election campaigns receive much attention in empirical research (e.g. Dolezal, Ennser-Jedenastik, and Müller 2016; Nai 2020; Papp and Patkós 2019; Walter and van der Brug 2013; Walter, van der Brug, and van Praag 2014), the use of negative campaigning in parliamentary debates is an under-researched field (with the exception of Curini and Martelli 2010; Ketelaars 2019; Poljak 2023; Poljak and Walter 2023). Empirically, it can be observed

that MPs resort to emotional rhetoric in parliamentary debates to distinguish themselves from ideologically distant parties (Valentim and Widmann 2023) and to please voters (Osnabrügge, Hobolt, and Rodon 2021). Negativity also finds its way into parliamentary competition in varying degrees of intensity (Haselmayer, Dingler, and Jenny 2022; Jenny, Haselmayer, and Kapla 2021).

I argue that the negative campaigning communication strategy, which has so far mainly been studied at party level, is also used by MPs to pursue their preferences (Ketelaars 2019; Poljak and Walter 2023). As outlined in the last section, their preferences can depend heavily on the preferences of the party leadership. The use of negative campaigning can incur costs for MPs, as well as parties, due to backlash effects (Garrazone 1984; Johnson-Cartee and Copeland 1991). It can be assumed that attacks are also generally unpopular in parliamentary debates and generate negative feelings towards the attacker and the associated party (cf. Roese and Sande 1993; Shapiro and Rieger 1992). Thus, parties can lose voters to the attacked party or a third party (Galasso, Nannicini, and Nunnari 2023). These negative effects can be passed on to MPs via internal party sanction mechanisms. Especially in the Austrian system, where the party leadership has great control over its MPs, this should be the case (Ennsner-Jedenastik and Müller 2014, 2015; Müller and Jenny 2000).

On the benefit side, there is a variety of potential benefits of using negative campaigning in parliamentary debates to fulfil the policy-, vote- and office-seeking preferences of themselves and their parties (Ketelaars 2019; Poljak and Walter 2023): parliamentary debates provide an important stage for parties to communicate their political beliefs (Bächtiger 2014; Bäck and Debus 2016; Debus and Tosun 2021; Ivanusch 2023; Proksch and Slapin 2012, 2014) and their ability to govern to the electorate (Proksch and Slapin 2012, 2014). Analogous to the considerations on the use of negative campaigning in election campaign debates, parties and their MPs can increase attention and publicity for themselves by using negative campaigning (Haselmayer, Wagner, and Meyer 2017; Mattes and Redlawsk 2015, 4–5; Pratto and John 1991; Schweitzer 2010), increase their standing in comparison to their political opponents (Brians and Wattenberg 1996; Fridkin and Kenney 2008; Garrazone 1984; Homer and Batra 1994) and receive attention from the mass media (Mattes and Redlawsk 2015, 4; Mutz 2015; Schweitzer 2010, 203–4).

Based on the concept of permanent campaigning, it can be assumed that parties also attack political opponents outside of election campaign periods in order to pacify their vote-seeking preferences (Poljak and Walter 2023). Permanent campaigning refers to actions by parties that correspond to the election campaign in order to maintain a positive public image and thus enable

future electoral success (Joathan and Lilleker 2023, 68). Furthermore, studies show that policy-based attacks weaken the reputation of the attacked actor (Lefevere, Seeberg, and Walgrave 2020; Seeberg and Nai 2021) or increase one's own reputation (Seeberg and Nai 2021). Attacks in parliamentary debates can thus weaken the performance of the attacked party in the next election, which can benefit the sponsor of the attack and their party (Poljak 2023b, 905; Poljak and Walter 2023, 5). Strengthening one's own political profile and increasing media attention are also reasons why parties attack their political opponents outside of election campaign periods (Poljak and Walter 2023, 5). This is particularly true at the end of the legislative period, as cooperation across party boundaries blurs the dividing line between parties in the perception of voters and parties therefore seek to differentiate themselves (Poljak 2023b, 907). It can be assumed that party leaders see speeches as a resource for achieving their preferences and use their power over their MPs to influence the content of their speeches. Vote-seeking interests at the individual level also have an impact on MPs: by attacking political opponents, MPs hope to gain increased visibility for their electorate and have the opportunity to weaken the reputation of their opponents in order to ultimately secure their re-election (Marcinkiewicz and Stegmaier 2019).

Similarly, at the level of parties and MPs, office-seeking preferences favour the use of negative campaigning in parliamentary debates. For one, party leaders have incentives to fulfil the requirements of their office to secure it and therefore target their political opponents (Ketelaars 2019, 1022). Furthermore, the opposition is interested in highlighting the mistakes of the current government (Elmelund-Præstekær 2010) and making it clear to the electorate why a change of government is desirable (Ketelaars 2019, 1022; Schwalbach 2022, 39). In contrast, governing parties can be expected to use a comparatively positive tone, as they want to communicate the successes of the current government to the electorate to secure their offices and government participation (Schwalbach 2022, 39). At the level of MPs, I expect that their preferences for office influence their calculation to use negative campaigning: politicians are interested in gaining media attention and defending their seat in parliament (Ketelaars 2019, 1019) in the context of the permanent election campaign (Strömbäck 2008). As they are dependent on the support of their party, it can be assumed that the desire to run negative campaigns at party level is transferred to MPs, as they want to present themselves as loyal to the party.

While parties in election campaigns primarily hope to gain more votes through the use of negative campaigning to win office (Somer-Topcu and Weitzel 2022; Walter, van der Brug, and van Praag 2014), it can be assumed that the use of negative campaigning in parliamentary debates is also influenced by policy goals (Green-Pedersen and Mortensen 2010; Otjes and

Louwerse 2018; Walgrave and De Swert 2007). Besides their goal of joint policymaking at the beginning of the election cycle (Schwalbach 2022, 38), these include the fact that parties want to popularise their issues (Ivanusch 2023, 2) and put them on the political agenda (Budge and Farlie 1983; Green-Pedersen 2007; Petrocik 1996). Also, they like to demonstrate ownership of a thematic area (Green-Pedersen and Mortensen 2010; Otjes and Louwerse 2018; Walgrave and De Swert 2007), strengthen their policy profiles (Crabtree et al. 2020; Klüver and Spoon 2020; Sagarzazu and Klüver 2017), differentiate themselves from other parties (Schwalbach 2022, 36–37) and want to communicate their positions to the electorate (Haselmayer and Jenny 2018, 1). Setting and communicating their issues is relevant for parties, because their policy positions influence the electorate's voting decisions (Alvarez and Nagler 1995; Green and Hobolt 2008). Parties can use negative campaigning to achieve these goals. By realising their policy preferences, the parties in turn hope to gain long-term advantages with regard to their vote-seeking and office-seeking preferences, as they can, for example, communicate their competence in an issue area to the electorate or demonstrate their ability to govern collectively (Poljak 2023b, 905). These considerations are underpinned by empirical studies that show that attacks based on policies diminish the reputation of the target in the electorate (Lefevere, Seeberg, and Walgrave 2020; Seeberg and Nai 2021), which in turn can be reflected in a poorer electoral result for that party (Poljak 2023b, 905).

In a similar manner, policy preferences also operate at the level of MPs. As noted above, MPs pursue their own policy preferences, which may differ from those of their party (Proksch and Slapin 2012, 2014; Sevenans, Walgrave, and Vos 2015) and may lead to internal party conflict (Kam 2009). Depending on the position within the party and the parliament, these policy preferences are differently pronounced and have different implications for the use of negative campaigning in debates. It can be assumed that politicians who focus primarily on policy creation – so-called policy advocates – concentrate above all on reaching compromises across party lines (Andeweg 1997) and therefore have only weak incentives to attack other parties and their members (Sevenans, Walgrave, and Vos 2015). In addition, they are strongly absorbed by their tasks and therefore engage less in inter-party disputes (Ketelaars 2019, 1023). The same applies to politicians who specialise in a policy area (Searing 1994): they are more pragmatic and want to influence the political decision-making process (Navarro 2012). It can be assumed that this type of politician is also less interested in attacking political opponents (Ketelaars 2019, 1023–24). Their counterparts – the generalists – do not shy away from such attacks, but see criticising their political opponents as part of their political self-image (Searing 1987, 434–41).

Their flexibility in terms of the topics they speak on makes them ideally suited for party work and criticising their political opponents in debates (Ketelaars 2019, 1023–24).

The cost-benefit analysis that precedes the use of negative campaigning in parliamentary debates is, as in election campaigns, influenced by individual (Haselmayer, Dingler, and Jenny 2022; Ketelaars 2019), party-level (Hix and Noury 2016; Ketelaars 2019; Poljak 2023b; Poljak and Walter 2023; Schwalbach 2022), systemic (Curini and Martelli 2010; De Giorgi, Moury, and Ruivo 2015; Palau Roqué, Muñoz Márquez, and Chaqués Bonafont 2015; Pardos-Prado and Sagarzazu 2019) and contextual (Poljak and Walter 2023; Proksch et al. 2019; Schwalbach 2022; Seeberg 2022) factors. The factors influencing the use of negative campaigning in the debates of the Austrian National Council are discussed in the following sub-chapters.

2.3 The role of 1st and 2nd order elections in the use of negative campaigning

This subchapter deals with the influence of first- and second-order elections – in the Austrian case, elections to the National Council and state parliaments – on parliamentary debates. To this end, Austria’s multi-level political system is presented in a brief overview. Subsequently, the elections at state and national level and their interactions are discussed. The special role of parties is addressed and how the electoral arenas in Austria are intertwined. Subsequently, the core of this paper is motivated and theoretical arguments are provided for how national and state elections as well as subsequent coalition negotiations motivate the use of negative campaigning in National Council debates.

2.3.1 Multi-level government and parties in Austria

Austria is a federal republic consisting of nine states (*Länder*).⁷ Although the republic is organised according to the federal principle – i.e. state functions are divided between the federal states and the federal government – this distribution of competences is characterised by a clear predominance of the federal government (Bußjäger and Eller 2023). The federal states are primarily responsible for tasks relating to the enforcement of laws and ordinances. Through the Federal Council (*Bundesrat*) – one of the two chambers of parliament – in which representatives of the federal states are represented according to their population size,⁸ the federal states can

⁷ In particular, these are Upper Austria (*Oberösterreich*), Lower Austria (*Niederösterreich*), Vienna (*Wien*), Burgenland (*Burgenland*), Styria (*Steiermark*), Carinthia (*Kärnten*), Tyrol (*Tirol*), Salzburg (*Salzburg*), and Vorarlberg (*Vorarlberg*).

⁸ The number of federal councillors per federal state is limited by both a cap and a base. The most populous federal state receives a total of twelve seats and each federal state sends at least three federal councillors (Fallend 2010, 167).

influence the federal legislative process (ibid., 50). However, the voting behaviour of the federal councillors is strongly oriented towards that of their party colleagues in the National Council (*Nationalrat*) – the second chamber of parliament (Holzinger 2006, 279; Hummer 1997, 374–75; Schäffer 2004, 49; Weiss 1997, 522–23). In addition, the weak legal position of the Federal Council is reflected in the fact that the National Council can override most objections by means of an insistence resolution. Only in the case of treaties that regulate the independent sphere of action of the federal states and constitutional amendments is the consent of the *Länder* necessary (Bußjäger and Eller 2023, 50). Historically, the weak influence of the states on federal policy is manifested in the small number of vetoes by the Federal Council against legislative decisions of the National Council (Obinger 2005, 204).

Nevertheless, the federal states are relevant in Austrian federalism: they can set their own rules in the state constitution, determine state-wide laws in the state parliament (*Landtag*) and exert influence on the federal government through informal cooperation mechanisms between the national and state levels (Bußjäger and Eller 2023, 51–53). This cooperation mechanism manifests itself, for instance, in the Conference of State Governors (*Landeshauptleutekonferenz*) as the highest-ranking state conference at the executive level and the Conference of State Parliament Presidents (*Landtagspräsidentenkonferenz*) at the legislative level, where informal agreements and declarations of intent are adopted (Bußjäger and Eller 2023, 53; Pelinka and Rosenberger 2007, 243). In addition to the legislative interdependencies, these informal institutions, such as the *Landeshauptleutekonferenz* or various expert commissions and working groups, ensure that federalism in Austria is often described as cooperative (Bußjäger 2010, 121, 2017, 244; Bußjäger and Johler 2020, 49; Karlhofer 2016, 626–27).

In this regard, it is worth noting a special feature of some federal states, the so-called government proportional representation (*Proporz*). This term describes the principle according to which state governments are not formed according to a majority principle, but rather all parties represented in the state parliament from a certain size are part of the state government (Ucakar, Gschiegl, and Jenny 2017, 143–44). Until 1999, except for Vorarlberg, all state governments were formed according to this principle. Currently, only Upper and Lower Austria adhere to the principle of *Proporz* representation. Salzburg and Tyrol abolished this mode of government formation in 1999, Styria in 2011, Burgenland in 2014 and Carinthia in 2017. In this context, the state of Vienna is a special case: the Senate – the equivalent of the state government – is filled according to *Proporz*, but the concept of non-official city councillors means that parties represented in the city senate have an office but no portfolio (ibid., 145). This

results in any coalition that holds a majority in the municipal council – the equivalent of the state parliament – exercising full government power (Hampel-Fuchs 2008, 55). One of the consequences of government *Proporz* is that the concept of opposition becomes diffuse. Since all parties represented in the state parliament are part of the government from a certain number of seats, the real opposition is reduced to very small parties that do not clear this hurdle (Pelinka and Rosenberger 2007, 239). In addition, the decision-making principle of the state governments varies: while state governments that are formed according to the *Proporz* principle consistently decide according to the majority principle, governments that are formed according to the majority principle have different decision-making modes: while in Salzburg, Styria and Tyrol the state governments decide unanimously in collegial matters, in the other states decisions are made by majority vote (Dolezal and Fallend 2023, 228). In addition, such systems are characterised by the absence of a resort principle: personnel sovereignty does not lie with the members of the state government, but with the state governors (*Landeshauptleute*) (Pelinka and Rosenberger 2007, 239–40). Last but not least, proportional systems are characterised by a consolidation of election results and thus of incumbency, which in turn leads to long terms of office for the state governors (Fallend 1997, 255–57).

In practice, the governors of the respective federal states enjoy a special position of supremacy: they act as a gatekeeper in the federal structure (Karlhofer 2011), are endowed with far-reaching powers and enjoy a high level of prestige (Karlhofer 2016, 622). Coupled with the aforementioned dominance of the national government, this makes the role of the state parliament relatively insignificant in practice, especially in federal-state relations (Fallend 2006, 987). The empirical accumulation that state governors are generally also state party leaders further strengthens their position (Karlhofer 2016, 622). Due to the extraordinary position of the state governors, state parliament elections are often effectively reduced to an election of state governors (Marko and Poier 2006, 949; Weber 2004, 78). In the media and in election campaigns, the state governors are often presented as sovereigns and are the focus of media coverage. However, this high degree of personalization harbours the risk of causing resentment among party functionaries (Fallend 2006b, 981). The state governors influence national policy through the above-mentioned informal cooperation mechanisms, such as the Conference of State Governors: here, the states coordinate their common interests vis-à-vis the federal government (Karlhofer 2016, 626) and act as de facto veto players for the federal level (Karlhofer 2011).

The party spectrum differs only marginally between the federal and state levels (Obinger 2005, 200): newer parties, such as the Greens or the liberal NEOS, also strive to be present in the

federal states and run in state elections (Karlhofer 2016, 618–19). Within this cooperative federalism, the Austrian parties play a central role (Obinger 2005). In the case of shifts in competences between the federal government and the states, party interests are at the forefront alongside regional interests (Bußjäger and Eller 2023). Although key decisions are approved in the state parliaments and the National Council, the course is set earlier in the parties (Pürgy 2015, 23). Furthermore, parties are a means by which state interests are transported to the federal level (Fallend and Heinisch 2020, 128–29). Based on the territorial organization of the state, party organizations are divided into federal, state, district, and municipal organizations, with the federal and state levels being the most important (Jenny 2023, 112). The relationship between the national and sub-national party levels in the Austrian parties is characterized by a close organizational connection (Hepburn and Detterbeck 2013, 88), but neither by homogeneity of opinion nor hierarchical order (Dachs 2003, 70). Compared to the federal level, the state parties have a relatively high degree of organizational autonomy, which is fed by relatively strong party funding at the state level and, in the case of government participation, by access to the personnel and technical resources of the offices of the state government (Fallend 2006a, 1036).

The state parties exercise control within the party and the federal state through various channels. Firstly, the state parties, which are involved in the state governments, appoint the members of government at the state level, whereby the state party chairmen are usually part of the government (Fallend 2006b, 987). Due to the high factional discipline within the state parliaments (Aigner 2006) and the high executive power at the state level (*ibid.*), the state parties have a high degree of influence on state politics – insofar as they are involved in government. Secondly, the state party chairmen, especially of state organizations with large memberships, are important players within the leadership bodies of the respective federal party and may even take part in coalition negotiations (Fallend 2006b, 987–88, 2006a). Thirdly, it is the state party organization together with the district party organizations that nominate a large proportion of the lists for the election to the National Council (Müller 2006). Within the Austrian party organizations, it is regional party powerhouses that balance the institutional power of the federal government and incorporate state interests (Bußjäger 2012). Regional associations with a large number of members are particularly decisive in recruiting members, campaigning and mobilizing for elections (Fallend 2006a, 1036). This can lead to the strategic considerations of a state party having a strong influence on the federal level, as was the case in the 2021 state election in Upper Austria: in order not to negatively influence the election result,

the introduction of stricter COVID-19 measures at federal and state level was refrained from in the run-up to the election (Bußjäger and Eller 2023, 55).

The major Austrian people's parties – namely the ÖVP and SPÖ – use a federalist strategy, whereby organizational units at state level are granted a comparatively high degree of autonomy (Dachs 2003, 81–84). Governance is largely organized under regional party elites, which accompany offices at federal and state level (Detterbeck and Hepburn 2010, 118). This form of organization is expressed in the distancing of single state associations from federal politics (Fallend 2006a, 1036; Müller 1994; Praprotnik 2017, 131), an increased willingness to criticize policies at the federal level (Abedi and Siaroff 2006; Müller, Plasser, and Ulram 2004) and the formation of coalitions at the state level that oppose the conditions at the federal level (Fallend 2006a, 1036).⁹ Overall, this has led to an increased modernist mode of cooperation between the state and federal organizational units in recent years, despite the formally close interdependence across government levels (Detterbeck and Hepburn 2010, 119–22). However, an uneven distribution of power between the state organizations can be observed, as the Austrian parties have strongholds in individual states¹⁰ and the size of the states as well as their importance varies (Dachs 2003, 130).

2.3.2 Multi-level electoral politics in Austria: first and second order elections

At least every five years, Austrian citizens are called upon to determine the composition of the National Council. Elections to the National Council are based on the proportional representation system. In the run-up to the elections, the campaigning parties draw up lists of their candidates, who in turn are elected in the election (Ucakar, Gschiegl, and Jenny 2017, 83–84). Although voters can change the order of the party lists by means of preferential votes (Müller 2005, 402), it is rarely the case that this leads to actual changes in the election result (Partheymüller and Huber 2023, 402). Müller concludes:

⁹ Under the ÖVP-FPÖ federal coalition between 2000 and 2005, a coalition of ÖVP and Greens was formed in Upper Austria in 2003, the SPÖ and ÖVP entered into a coalition agreement in Tyrol in 2003 and the FPÖ and SPÖ concluded a working agreement in Carinthia in 2004.

¹⁰ Lower Austria, Upper Austria and Styria are major centres of power for the two major popular parties, the SPÖ and ÖVP, especially in terms of their membership figures (Pelinka and Rosenberger 2007, 237–38). In addition, the SPÖ relies heavily on the regional organisation in Vienna (Dachs 2003, 130). Besides, the ÖVP has a dominant position in western Austria, namely in Vorarlberg and Tyrol. Strongholds for the SPÖ are historically found in the east of the country – Burgenland and the capital Vienna (Umek 2022, 106). For the Greens, such centres of power are less pronounced and there is a lack of party organisations at municipal level in many federal states (Umek 2022, 106). Carinthia is such a centre of power for the BZÖ (2005-2018) and FPÖ (1999-2005 and since 2013) (Umek 2022, 106). The importance of local party strongholds is also reflected in the varying results in the National Council elections by federal state (Jenny 2009).

„In short, the Austrian electoral system is a proportional representation (PR) system and within the universe of real-world PR systems one of those closer to the end of full proportionality.” (Müller 2005, 397)

Due to Austria’s federal structure, elections are also held in the Austrian Länder every five years.¹¹ These follow the parliamentary principle, i.e. the state parliament is elected and the state government, headed by the state governor, is legitimized by the parliament (Pelinka and Rosenberger 2007, 239). As with the elections to the National Council, the elections to the state parliaments are held as a proportional representation system (RIS 2024a), whereby voters can also influence the order of the lists through the preferential vote (Reynolds, Reilly, and Ellis 2008, 60; Umek 2022, 99).

Given the division of powers between the federal and state governments, these state elections in Austria are referred to as subordinate or second-order elections (Tenscher 2012). These terms go back to Reif and Schmitt (1980): the two authors argue that elections in multi-level political systems can be divided into first-order and second-order elections. Elections to the national parliament are first-order elections, while the term second-order election covers regional and municipal elections as well as elections to a second chamber (Reif and Schmitt 1980, 8–9). According to Reif and Schmitt, the significance of these subordinate elections is limited to local areas or indirect effects on the main arenas of the respective states (*ibid.*). This approach was theoretically structured in the Second Order Election Model (SOE): it is argued that the influence of electoral arenas goes from the more powerful level to the weaker level and that this influence becomes stronger the closer the first and second order elections are to each other and the greater the power gap between the two levels is (Golder et al. 2017, 3–4).

According to this idea, state elections are only sideshows dominated by national issues and the performance of a party in a state election campaign is a consequence of its performance at the national level (Golder et al. 2017, 3–4). In this view, parties would pay little attention to these sideshows and instead concentrate on the national political arena (*ibid.*). Empirically, there is mixed evidence for the theses put forward: while low voter turnout and the poor performance of national governing parties in second-order elections confirm the model (Golder et al. 2017, 3; Jeffery and Hough 2006, 252), there is also evidence to the contrary. For example, research by Schakel and Jeffery (2013) shows that regional elections are perceived as second-order elections by some voters, but not by a majority of them. In fact, some voters perceive regional elections as more important than the supposed first-order elections at national level (Cutler 2008). For Austria, it can be observed that voters exhibit different voting behaviour at national

¹¹ Apart from Upper Austria, where elections must be held at least every 6 years.

and state level (Abedi and Siaroff 1999; Pelinka and Rosenberger 2007, 238, 241), which can be seen as a counterargument to the thesis that state elections are second-order elections. The same applies to the observation that voter turnout in regional and national elections is almost the same (Umek 2022, 103–4). These mixed indications are accompanied by accusations that the SOE is blind to the effects of electoral systems and does not name the micro-mechanisms underlying the model and thus becomes a black box (Golder et al. 2017, 5). It follows that electoral arenas should not be studied as an isolated entity (Bechtel 2012; Golder et al. 2017; Schakel 2018, 2021; Schakel and Romanova 2021).

To overcome these drawbacks, Golder et al. (2017) present a refined model to capture the interaction of political arenas and to describe the behaviour of parties and the electorate in this interaction network. Using their model to describe electoral politics at multiple levels, the authors aim to capture the interdependencies between electoral arenas in a political system and the effects of one arena on another. They argue:

“When we talk about multi-level electoral politics, then, we typically refer to the extent to which the behaviour of parties and voters in one electoral arena is affected by what goes on in another electoral arena within the country. When political actors do not only respond to the initiatives provided by the election at hand, but are also influenced by the coattail effects from another electoral arena, the outcomes of the election at hand differ from what would have been observed in a pure and isolated election. Multi-level governance, then, should matter for our understanding of electoral politics.” (Golder et al. 2017, 3)

This approach also assumes that parties engage in office-, policy- and vote-seeking (Strøm and Müller 1999), although the specific form and weighting of these preferences differs between parties and political actors (Golder et al. 2017, 15). For these reasons, it is too simplistic to assume that all parties and political actors value the importance of different political arenas equally (ibid.). This has consequences for the strategic considerations of parties regarding their resource allocation: if a party considers an electoral arena to be more valuable, it is prepared to allocate more resources to this election campaign (ibid.). The parties then decide on a campaign strategy, policy positions and representatives who run under their party label (ibid., 15–16). In addition to the valorisation of campaign arenas, it is the parties’ resources in terms of money and willing members that determine the extent of campaigning and participation in election campaigns (ibid., 16). Finally, contextual factors, such as the electoral system, influence the strategic decisions of parties to engage in election campaigns.

In the face of an election, parties decide on their allocation of resources depending on the importance they assign to the respective electoral arena. To maximize their policy-, office- and vote-seeking goals, the parties use, among other things, speeches in the National Council. As explained in section 2.2.2, parties convey their political positions to potential voters (Mayhew 1974; Proksch and Slapin 2012, 521) and try to influence them (Marcinkiewicz and Stegmaier

2019, 578). In addition to the more general objectives of the parties, MPs have individual preferences that may differ from those of the party and use their speeches in parliament to achieve their goals. As already explained in section 2.2.3, parties and MPs can use negative campaigning in their speeches to achieve their political goals. How the Austrian elections at federal and state level and the subsequent government formation processes influence the use of this communication strategy will be the subject of the next two sections.

2.3.3 The influence of first order elections on the use of negative campaigning

Based on their theoretical considerations, Proksch and Slapin (2014, chap. I.2) formulate empirical implications for parliamentary behaviour in proportional representation systems, as is the case in Austria. The significance of the preferential voting rule in Austria for the outcome of the election (Partheymüller and Huber 2023, 402) and consequently the behaviour of MPs in parliament (Marcinkiewicz and Stegmaier 2019) is negligible. The list position is the most important criterion for winning a seat in the National Council (Partheymüller and Huber 2023, 402). This results in a strong dependence of candidates on the party, which is why candidates can hardly be seen as independent actors in the National Council election campaign (Eder, Jenny, and Müller 2015). Proksch and Slapin (2014, 48) further argue that in closed-list systems, great value is placed on party unity, as citizens are strongly oriented towards party labels when voting, while the personalities of individual parliamentarians only play a subordinate role. This is particularly true in the period immediately before an election, as a clear party label is extremely important for the communication of party policy content and thus the voting decision (Aldrich 1995; Cox and McCubbins 2007; Downs 1957; Kiewiet and McCubbins 1991). Accordingly, MPs attach greater importance to representing the party line than to emphasize their own position (Proksch and Slapin 2014, 48). This reflects the strong dependence of MPs on the party: without the support of the party, re-election and career advancement are impossible (*ibid.*, 48–49). For the leadership of Austrian parties, it can be concluded that this allows them to exert strong control over the distribution of speaking time as well as the message conveyed by MPs (*ibid.*, 55).

The use of negative campaigning in the run-up to National Council elections in Austria is a story of ups and downs: election campaigns from 1945 until the 1960s were characterized by slogans of fear (Dolezal et al. 2014, 100) and parties trying to paint a negative picture of the opposing parties (Hölzl 1974). In contrast, the campaigns of the early 1970s were comparatively positive (*ibid.*), followed by a shift in orientation in the 1980s (Plasser, Scheucher, and Sommer 1995). The election campaigns of the 21st century were as well characterized by a widespread

use of negative campaigning (Dolezal, Ennser-Jedenastik, and Müller 2015, 2016, 2017; Müller et al. 2014), which brought the 2006 National Council elections headlines such as the *Triumph of Negative Campaigning* (Hofer 2007). Assuming that such a communication strategy is also used in National Council debates is therefore reasonable – also against the background of empirical studies on negativity in the National Council (Haselmayer, Dingler, and Jenny 2022; Jenny, Haselmayer, and Kapla 2021).

It should be noted that parliamentary debates in general (Ilie 2006), as in the Austrian case, have a high degree of institutionalization, which limits the speakers' room for manoeuvre (Ivanusch 2023, 2). The rules of parliamentary procedure are laid down in the federal act on the rules of procedure of the National Council (Altwanger and Zögernitz 2006; RIS 2024b). The order of speeches is determined by the President of Parliament, with members of different parties taking turns. The speaking time of MPs is limited; the speech must be on the topic of the debate. Furthermore, the plenary may be addressed a maximum of two times. If colleagues are insulted or the President of Parliament is disrespected, the President can call the speaker to order, whereby the speaker can be deprived of the floor if she must be called to order twice (Zima, Brône, and Feyaerts 2010, 138). The governing parties have a high degree of agenda-setting power and can adjust the topic of debate according to their preferences (Cox and McCubbins 2005, 2007; Döring 1995).

In the National Council, parties use the debates to compete on issues (Ivanusch 2023, 3), with governing parties praising their programme while the opposition criticizes it (Gruber 2018). Empirical evidence from the UK, Belgium and Croatia shows that the closer it gets to election day, the greater the competition over issues (Poljak and Walter 2023). Speeches are used less to discuss different positions and reach compromises with political opponents, but rather to reaffirm their own positions and communicate them to the public (Gruber 2018). At this point in the electoral cycle, it is crucial that parties differentiate themselves from other parties and communicate their unique characteristics to their voters (Sagarzazu and Klüver 2017; Schwalbach 2022). To increase their own prestige, interjections and rebuttals are used by MPs to attack, tease, or outdo their political opponents (Zima, Brône, and Feyaerts 2010, 161). All these strategic forms of communication aim to maximize the policy, vote, and office preferences of one's own party while weakening the standing of one's political opponent. As explained, negative campaigning is an instrument for achieving these goals.

As parties' policy, vote and office preferences shift over the electoral cycle (Poljak and Walter 2023, 2), negative campaigning is increasingly used as a vote-winning strategy (Somer-Topcu and Weitzel 2022; Walter and van der Brug 2013) immediately before the election (Seeberg

2022). I argue that Austrian parties and their MPs use this form of communication more frequently in the run-up to National Council elections, as their actions at this time are primarily dominated by vote-seeking (Poljak and Walter 2023, 2). Especially towards the end of the legislative cycle, it is argued that parties insist on their own issue positions and refrain from cooperating with other parties, which is reflected in more negative language (Proksch et al. 2019; Schwalbach 2022, 38–39) and increased political attacks (Poljak 2023b; Poljak and Walter 2023). At this point, parties and MPs tend to strengthen their own ideological profile, seek public attention and try to weaken the electoral appeal of their political opponents, for which they employ negative campaigning (Poljak 2023b, 906–7; Poljak and Walter 2023, 5). To realize the potential benefits of negative campaigning shortly before the election, parties are willing to accept possible costs of such attacks, such as loss of voter support, losing votes to a third party or limiting the chances of cooperation with other parties after the election (Dodd and Schraufnagel 2012; Galasso, Nannicini, and Nunnari 2023; Walter and van der Eijk 2019). The first hypothesis of this thesis is therefore as follows:

- H1 Members of the National Council resort to negative campaigning to a greater extent in the immediate run-up to National Council elections than at other times during the legislative period.

In contrast, as soon as the elections are over and the conditions for the upcoming legislative period have consolidated, the parties' urge to distance themselves from their political opponents and discredit them rapidly diminishes (Poljak 2023b; Poljak and Walter 2023; Schwalbach 2022; Seeberg 2022). With the past election behind them, it is now less vote-seeking interests than office- and policy-seeking interests that determine the actions of the parties. In multi-party systems, elections are usually followed by coalition formation processes in which parties negotiate how the government will be composed for the next legislative cycle. I argue that, in contrast to other periods of this cycle, periods of coalition negotiation are characterized by a low incidence of political attacks in parliamentary debates. First, this results from the costs for negotiating parties: research on the use of such communication methods during election campaigns suggests that attacks cause costs in post-electoral negotiations (Hansen and Pedersen 2008; Haselmayer and Jenny 2018; Walter and van der Brug 2013) and fuel distrust between negotiators (Golder 2010). Since coalition negotiations involve repeated interactions between

party leaders (Müller, Bäck, and Hellström 2024, 13), mutual trust between the parties is crucial (Tavits 2008) to the success of the negotiations (Warwick 1996).¹²

To fulfil their office-seeking preferences, all parties with coalition potential refrain from attacking the other parties (cf. Elmelund-Præstekær 2010; Ezrow 2007; de Nooy and Kleinnijenhuis 2013, 2015).¹³ The same applies to the policy-seeking preferences of the parties, as only by forming a coalition is it possible to govern and implement political ideas.¹⁴ Political attacks in such a context would jeopardize the success of negotiations due to the media attention they attract – if the sponsor of the attack is part of the negotiations – or an exclusion criterion for the start of negotiations – should the sponsor of the attack be outside of negotiations (cf. Mair 1996). Furthermore, in the absence of a coalition agreement and thus a guideline for political work in the coming years, opposition attacks based on policies are not possible, which in turn is reflected in a lower level of negative campaigning.

In light of empirical evidence that early re-elections – to which failed negotiations can lead – reduce voters' attitudes towards democracy (Morgan-Jones and Loveless 2023) and that the perpetrators of such re-elections are punished (Daoust and Péloquin-Skulski 2021; Sevi, Aviña, and Dassonneville 2023), I argue that parties are reluctant to disrupt coalition negotiations. It can also be assumed that voters have had enough of political disputes after election campaigns and are in favour of suspending political attacks for the time being. Instead, they expect political work to begin (Ecker and Meyer 2020; Markwat 2023). To avoid worsening their standing with the electorate, parties therefore resort less frequently to negative campaigning during coalition negotiations. These effects accumulate in a calm before the storm after elections, in which parties are reluctant to attack each other. This translates to disputes in parliamentary debates. The second hypothesis of this paper summarizes this effect:

¹² This is exemplified by the failure of the negotiations between Christian Democrats, Neo-Liberals, and Greens in Germany 2017 (Hornung et al. 2020): due to the increased public attention and the leaking of negotiation points, building mutual trust between the three parties was impossible and resulted in the failure of the negotiations. The importance of excluding the public for the success of the negotiations was again demonstrated in the subsequent negotiations between the Christian Democrats and Social Democrats, which were crowned with success (ibid., 343).

¹³ In the recent past, Austria has been characterized at the federal level by the fact that the parties represented in the National Council all have a fair degree of coalition potential (Meffert and Gschwend 2010) and are not excluded from government in advance. As a result, it can be assumed that the potential participation of nearly all parties in government means that no party wants to undermine this potential through excessive attacks.

¹⁴ In general, the federal government in Austria in recent history has been characterized by coalition governments. Exceptions to this were the sole government of the ÖVP between 1966 and 1970 and the SPÖ between 1970 and 1983. The addition of the Greens and NEOS led to a further diversification of the party landscape, which, in addition to the balance of power between the FPÖ, SPÖ and ÖVP, makes coalition negotiations unavoidable.

H2 Members of the National Council resort to negative campaigning to a lesser extent in the period between the National Council elections and government formation than at other times during the legislative period.

2.3.4 The influence of second order elections on the use of negative campaigning

Historically, politics (Dachs 2008, 91), like elections at state level (Karlhofer 2016, 619), were strongly influenced by the federal level, with state elections serving as an indicator of satisfaction with the federal government (Dachs 2006; Hadler and Haller 2001; Schakel and Jeffery 2013; Schakel and Romanova 2021; Stöger 2022, 133). Due to the widespread use of the *Proporz* system and the associated consensus orientation of state politics, open conflicts between the parties rarely broke out (Dachs 2008, 92). Election campaigns were often seen as an irrevocable necessity, after which one could return to consensual decision-making (ibid., 93). Due to the supremacy of the state governors, election campaigns in the states often focus strongly on the respective top candidates of the (Dachs 2008, 91; Filzmaier and Hajek 2005, 11–13, 22–29; Stöger 2022, 130). In addition, most countries were characterized by clear party hegemony (Pelinka and Rosenberger 2007, 241). As a result, a significant proportion of the electorate attached little or no importance to state elections (Hadler and Haller 2001).

However, the shift away from the *Proporz* system in most states and the increased focus on state policy issues intensifies election campaigns at the state level (Umek 2022, 109)¹⁵ and makes deviations from the power constellation at federal level more likely (Abedi and Siaroff 1999; Jansesberger, Lefkofridi, and Mühlböck 2021; Pelinka and Rosenberger 2007, 238). The latter seems to be particularly true for partisan and nationwide centres of power (Schakel and Jeffery 2013). In addition, more recent elections are characterized by stronger voter migration (Pelinka and Rosenberger 2007, 241; Stöger 2022). Also, Austrian voters make their voting decisions closer to state election day, which increases the importance of the election campaign (Filzmaier, Perlot, and Beyrl 2011, 60–61). However, the thematic influence from the federal to the state level persists: even in current state elections, it is often federal issues that influence voting decisions (Cabeza 2018; Schakel 2015; Stöger 2022, 130) especially when the sub-national election is held close to the national election (Bolgherini, Grimaldi, and Paparo 2021; Schakel 2013), albeit with differences among voters depending on the elected party (Filzmaier and Hajek 2005; Filzmaier, Perlot, and Beyrl 2011). In addition, national parties focus parts of their election programs on national issues (Gross and Jankowski 2020; Gross and Krauss 2021)

¹⁵ With the exception of the states of Tyrol and Vorarlberg, where the ÖVP holds an undisputed dominant position (Umek 2022, 109).

to persuade voters to support them (Cabeza, Gómez, and Alonso 2017), especially when the national election is imminent (Gross, Krauss, and Praprotnik 2023). Since Austria's accession to the EU, however, a shift can be observed in that state parliament election campaigns are increasingly determined by state issues (Karlhofer 2016, 620). Overall, a departure from the second-order election framework can be observed for elections in the Austrian states, which has also been confirmed by empirical studies (Schakel 2013; Schakel and Jeffery 2013).

National party organizations and their strategic calculations in Austria are influenced by state parliament elections in several ways (Bußjäger and Johler 2020; Karlhofer and Pallaver 2013; Thorlakson 2020). Firstly, there are electoral effects: such effects from a regional/national electoral arena into the national/regional sphere are referred to as vertical electoral spill-over (Schakel and Romanova 2021, 305). While the influence from a higher to a lower level has been investigated in many studies (e.g. Jeffery and Hough 2001; Kern and Hainmueller 2006; Tronconi and Roux 2009), opposite effects are a newer field of research (Schakel and Romanova 2021, 300). In empirical studies that include Austria, there is evidence of a springboard effect in regional elections, i.e. the good performance of a party in a regional election is associated with a good performance in the next national election. This is explained by the increased resources that the party acquired and was able to use in the national election (Dinas and Foos 2017). Besides, a high level of media attention (Praprotnik 2017, 181), institutional relevance of the regional unit (Masseti and Schakel 2017) and a stronger level of organization (Spoon and West 2015) explains this effect. These factors increase the attractiveness of the party in general and in elections in particular (Dinas and Foos 2017, 5–6). In addition, theoretical and empirical arguments suggest that the high level of media attention paid to state elections across the country means that all voters align themselves with one party thereby influencing their voting decisions in the upcoming national elections (Bechtel 2012). Secondly, it is the institutional setting that gives state elections significance for the federal level. State elections determine access to representative institutions (Dinas and Foos 2017), such as the Conference of State Governors or the Federal Council. The relevance of state elections was demonstrated in the 2021 election in Upper Austria, for instance, where the opposition lost its majority in the Federal Council due to the FPÖ's comparatively poor performance (Stöger 2022, 133).

Thirdly, the states and regional party organizations play a decisive role in the party's resources, since, as can be seen from the parties' financial reports, a large proportion of funding is acquired at state level (Austrian Court of Audit 2023; Umek 2022, 110). Parties also gain new members and better funding by entering state parliaments, which is reflected in an improvement in the

party's organizational structure (Dinas and Foos 2017). It should be noted, however, that parties do not necessarily attach the same importance to all state parliamentary elections (Golder et al. 2017, 15), as parties increasingly focus on their respective party strongholds, for instance (Pelinka and Rosenberger 2007, 237–38; Umek 2022, 106).

This shows that state elections cannot be thought of independently of the national level but are interdependent. Since resources won in one arena can be used in another, success in one arena favours success in the others (Panebianco 1988, 9). For the reasons mentioned above, it can be assumed that state elections are also relevant for party organizations at the federal level. They want to win regional votes, fill offices, and enforce policies. To this end, they use the resources available to them, including speeches in the National Council.¹⁶ To weaken their political opponents' chances of success in elections and increase their own, political parties and their MPs make use of negative campaigning in parliamentary speeches. Immediately before a state election, the regional election campaign influences speaking behaviour in the National Council and the parties conduct strategic attacks against their political opponents there. The following hypothesis is derived from these considerations:

- H3 Members of the National Council use negative campaigning to a greater extent in the immediate run-up to state elections than at other times during the legislative period.

Following the same considerations as for government negotiations after first-order elections, similar behaviour can be expected for second-order elections. Mutual trust between parties is also the key to successful coalition negotiations at the regional level (Steinert and Yordanova 2016). With the election behind them, vote-seeking is less relevant at the sub-national level than policy- and office-seeking. In order not to alienate supporters who have had enough of disputes after the last election campaign, parties are moving disagreements between them out of the public. By refraining from using mutual, public criticism, both negotiating and excluded parties prevent the coalition negotiations from being jeopardized or try to keep negotiation costs low in subsequent talks. I argue that these strategic considerations also spill over into national parliaments through the transmission mechanisms outlined above. These considerations culminate in the hypothesis below:

¹⁶ However, it is conceivable that party strategists may refuse to elevate the state election to a national level, e.g. due to poor approval ratings for politicians or unpopular policies at the national level. In such a case, it is possible that state parties would not want the national level to interfere. However, I assume that disapproval of all MPs at the same time is unlikely. In the case of unpopular policies, the national opposition parties will nevertheless use the speeches in the National Council for their own purposes and address the national election. This would then lead to the governing parties also having to engage on the issue as they are forced to take a stand by the opposition's speaking behaviour.

H4 Members of the National Council use negative campaigning to a lesser extent in the period between state elections and the inauguration of the state government than at other times during the legislative period.

2.4 Which factors fuel negative campaigning in the Austrian *Nationalrat*?

Since the use of negative campaigning in ordinary parliamentary debates has received little academic attention, it is unclear which systemic, partisan, and individual factors influence the use of negative campaigning in parliamentary speeches. For this reason, this subsection presents a selection of factors that characterise the strategic calculation of political attacks. Firstly, the incumbency status of the sponsor and target of such attacks will be analysed and transferred to the parliamentary context. This variable is a recognised explanatory factor in research on negative campaigning (e.g. Nai 2020) and has also been tested in studies in a parliamentary context, analysing questioning times (Poljak 2023b; Poljak and Walter 2023). Whether this factor plays the same role for ordinary parliamentary speeches is therefore interesting from a scientific perspective. It also discusses how incumbency at the level of the states in which an election takes place has an influence on speaking behaviour in the National Council. Secondly, the interaction effect of the incumbent status of the target and sponsor of an attack is considered: it is argued why coalition partners, and their MPs attack each other less frequently. This factor has also been tested in past research on election campaigns (e.g. Haselmayer and Jenny 2018) and it is therefore important to determine whether the same effects are present in parliamentary debates. Thirdly, a previously untested individual factor that is assumed to explain the engagement of individual MPs in negative campaigning is examined: the origin of the MP. Fourth, the role of the mode of government composition at the state level for the attack behaviour of parties and their MPs in the National Council is investigated. More specifically, it is asked whether elections in federal states with government *Proporz* are less negatively contested.

2.4.1 Incumbency

It is generally hypothesised in research on negative campaigning that incumbents are less aggressive in election campaigns than challengers (Lau and Pomper 2004; Nai 2020; Skaperdas and Grofman 1995; Walter and Nai 2015; Walter and Vliegenthart 2010). This follows from several advantages that incumbents have over their counterparts. Firstly, voters generally favour incumbents (Abramowitz, Alexander, and Gunning 2006; Ansolabehere and Snyder Jr. 2004; Gronke 2000, 140–41). Voters' favourable image of incumbents stems from their experience in

office and the name recognition of incumbents (Fiorina 1989; Gronke 2000; Jacobson 2004). Secondly, incumbents can promote themselves based on their previous work and successes in office (W. L. Benoit 1999; Nai 2020, 432; Walter and van der Brug 2013, 370). Thirdly, they enjoy greater media attention (Kaid and Holtz-Bacha 2006).

Challengers, in contrast, have an electoral deficit and must overcome the incumbent's natural advantages (Druckman, Kifer, and Parkin 2009; Lau and Pomper 2004). To break the status quo, opposition parties and their representatives must go the extra mile and present the electorate with good reasons why they should replace the incumbent (Kahn and Kenney 2004; Mair 1996). To promote themselves, they mainly use rhetoric, such as negative campaigning (Druckman, Kifer, and Parkin 2009, 343), because they lack advantages and have nothing to show for it. Furthermore, challengers are comparatively poorly represented in the media (Hopmann, de Vreese, and Albæk 2011) and expect increased attention from the use of negative campaigning in election campaigns (Geer 2012, 423; Maier and Nai 2023; Nai 2020). Finally, opposition members have no office to lose and are therefore more willing to accept the risks of a potential backlash (Garrazone 1984) and practise negative campaigning (Maier and Nai 2023, 197; Valli and Nai 2020, 2–3).

Empirical evidence supports these considerations, according to which incumbents engage in negative campaigning less frequently: Walter and van der Brug's (2013) study of ten Dutch parliamentary election campaigns, for instance, shows that opposition parties more frequently resort to negative campaigning in election adverts. The same applies to election campaigns in other European multi-party systems (Elmelund-Præstekær 2010; Hansen and Pedersen 2008; Maier and Nai 2023; Walter and van der Brug 2013). The same can be observed in the country comparison studies by Valli and Nai (Nai 2020; 2020): when looking at election campaigns in democracies across the globe, a stable correlation emerges here, according to which challengers are more likely to go negative.

I argue that the theoretical arguments as to why incumbents refrain from using negative campaigning can be transferred to the parliamentary context. MPs who belong to a governing party use their current work and successes to promote themselves and their party in parliamentary debates and are not dependent on attacks against other parties (cf. W. L. Benoit 1999; Nai 2020, 432; Walter and van der Brug 2013, 370). In addition, governing parties and their MPs already enjoy a high level of media attention due to their government status (cf. Kaid and Holtz-Bacha 2006). Besides, they fear losing their status at the next election and therefore do not want to risk possible backlash effects. In contrast, MPs from opposition parties aim to question the suitability of the governing parties for government (cf. Kahn and Kenney 2004)

and criticise their work (cf. Trent and Friedenberg 2008). They additionally try to attract the attention of the public and the media through attacks (cf. Nai 2020). Finally, the opposition parties and their MPs have no office to lose and are therefore more willing to take risks when using negative communication strategies (cf. Maier and Nai 2023, 197). Initial empirical studies of dynamics within parliaments provisionally confirm these considerations (Poljak 2023b; Poljak and Walter 2023). From these considerations follows:

- H5 Members of a national governing party use negative campaigning in National Council debates to a lesser extent than members of the national opposition parties.

Against the background of the considerations in section 2.3.4, comparable mechanisms can also be expected in the run-up to regional elections. Parties and their MPs align themselves in National Council debates along the status distinctions at state level: parties that are part of the government in the state where elections are to be held use negative campaigning to a lesser extent than the other parties. They can rely on their achievements in government and their public attention, whereas opposition parties at the state level must compensate for these disadvantages. For the reasons explained above, they therefore use negative attacks to a greater extent in National Council debates. These considerations are summarised in sixth hypothesis:

- H6 In the run-up to state elections, the state governing party is less likely to resort to negative campaigning in National Council debates than the state opposition parties.

In addition to the reluctance to use negative campaigning, incumbency affects the use of negative campaigning in another way: empirical studies show that governing parties and incumbents are more often the target of negative campaigning than opposition politicians and parties (Dolezal, Ennser-Jedenastik, and Müller 2015; Nai 2020; de Nooy and Kleinnijenhuis 2013; Sigelman and Shiraev 2002; Walter 2014a). These empirical observations are theoretically underpinned by the fact that opposition parties use attacks on governing parties to justify a change of government (Trent and Friedenberg 2008) and to make it clear why they should replace the current government (Hale, Fox, and Farmer 1996; Kahn and Kenney 2004). Furthermore, governing parties are the parties that performed strongly in the previous election and from which many votes can therefore potentially be taken (Walter and Nai 2015, 104). Lastly, attacks on governing parties lend themselves to being more likely to attract media attention than attacks on other opposition parties (Dolezal, Ennser-Jedenastik, and Müller 2015, 169–70). This can also be transferred to the behaviour of parties and their MPs in National Council debates, even outside of election campaigns. The following hypothesis is derived from these considerations:

H7 National governing parties are targeted by negative campaigning in National Council debates to a greater extent than national opposition parties.

As with the comments on the role of the government status of the sponsor of negative attacks, similar effects can be expected during the period of state election campaigns. Parties that are part of the government at state level will be attacked more frequently in the National Council debates before a state election than the other parties. The opposition parties in the state where the upcoming election is taking place and their MPs want to justify a change of government at state level (cf. Trent and Friedenberg 2008), criticise the previous government work in the state (cf. Kahn and Kenney 2004) and win votes from the relatively strong state government parties (Walter and Nai 2015, 104). From this follows:

H8 In the run-up to state elections, the state government party is targeted by negative campaigning in National Council debates to a greater extent than the state opposition parties.

2.4.2 Coalitions

The significance of the electoral system for the attack behaviour of parties is reflected in the importance of coalitions for government work. While under majority rule everything falls to the winner of the election, resulting in a high degree of competition (Bol and Bohl 2015), coalition formation is decisive in proportional representation systems (Elmelund-Præstekær 2010; Nai 2020; Walter, van der Brug, and van Praag 2014). Parties that have the potential to be part of the next government¹⁷ are encouraged to limit their attacks against potential coalition partners (Kaid and Holtz-Bacha 2006) to avoid costs in coalition negotiations (Golder 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013) and aggravating relations with close parties (Ezrow 2007). In order to maintain their chance of winning office, parties therefore refrain from negative campaigning against potential coalition partners (de Nooy and Kleinnijenhuis 2015). Since coalition partners have usually built mutual trust and understanding during their time together in government, which in turn has a positive effect on future cooperation (Franklin and Mackie 1983), they are generally interested in continuing their coalition (Martin and Stevenson 2001, 2010). Also, the cost of maintaining a coalition is usually cheaper than forming a new coalition (Martin and Stevenson 2010; Warwick 1996). Coalition partners are therefore particularly reluctant to attack each other.

¹⁷ The coalition potential of a party depends, among other things, on its size, its experience in government and its position in the ideological space (Elmelund-Præstekær 2008, 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013; Walter, van der Brug, and van Praag 2014).

In addition, there are framework conditions for government coalitions that moderate their attack behaviour among themselves. Due to their joint government work, they do not have the opportunity to distance themselves from each other's government history, as this would undermine their own successes in government (de Nooy and Kleinnijenhuis 2013). They therefore refrain from attacking their coalition partner and focus on celebrating their joint achievements (W. L. Benoit 1999). In the specific case of Austria, however, it is argued that this logic does not apply to coalition parties with equally powerful partners as the desire to be the next head of government and policy disagreement between the parties predominate (Dolezal, Ennser-Jedenastik, and Müller 2015, 170). Empirical studies provide mixed results on this strand of theory. While individual studies show that coalition partners do not attack each other (Elmelund-Præstekær 2008, 2010; Hansen and Pedersen 2008; de Nooy and Kleinnijenhuis 2013; Walter 2012), this does not apply to studies of Austrian and Dutch election campaigns (Dolezal, Ennser-Jedenastik, and Müller 2015; de Nooy and Kleinnijenhuis 2015) or is of secondary importance (Walter 2014a). Haselmayer and Jenny (2018) provide supporting results, showing that attacks follow a block formation between government and opposition and that coalition partners attack each other but refrain from virulent attacks.

It follows from the theoretical considerations for the debates in the Austrian National Council that it is to be expected that MPs who belong to different governing parties will attack each other less strongly than if the sender or target of the attack is part of the opposition. In general, governing parties are interested in the continuation and stabilisation of their coalition and should therefore attack each other to a lesser extent in speeches. The shared government responsibility and government history of coalition partners also favours praising each other as a more promising strategy. Consequently, both during election campaigns and in day-to-day politics, an interaction effect can be expected between the incumbency status of the sponsor and the target. The following interaction hypothesis formulates this effect for speeches in the National Council:

- H9 National coalition partners attack each other in debates in the National Council to a lesser extent than in other constellations of opposition and government.

Since the theoretical considerations also apply to election campaigns prior to national elections, it stands to reason that comparable effects can also be observed at federal state level, especially in the run-up to state elections. Here too, coalition partners at state level are better advised not to attack each other to facilitate future coalitions and avoid discrediting their own government work. These considerations are transferred to the strategic calculations of the parties in the

National Council and their MPs. In the run-up to state elections, the counterparts of state governments at federal level and the corresponding MPs shy away from attacking each other. This gives rise to the following interaction hypothesis:

- H10 In the run-up to state elections, the state government parties attack each other in debates in the National Council to a lesser extent than other constellations of state opposition and government.

2.4.3 Origin of the speaker

This section deals with an individual factor of MPs which influences the speaking behaviour of MPs during state parliament elections: the origin of the MPs. As already discussed in section 2.3.1, it is partly the state parties that nominate the National Council electoral lists (Müller 2006). This results in a dependency of MPs on the respective federal state party that nominated them. In order to secure the support of their federal state party in the upcoming National Council elections and to obtain a promising place on the list, individual MPs have an interest in pleasing their federal state party with regard to their office preferences (cf. Ketelaars 2019). I argue that they use their speeches in the National Council to a certain extent for this purpose and try to support their federal state party in the election campaign. To this end, they often resort to negative campaigning to put their party in a relatively good light and attack their political opponents at state level. It follows that such MPs are more likely to attack the political opponents of their federal state party than MPs who have no party connections to the federal state. The hypothesis derived from these considerations is as follows:

- H11 In the run-up to federal state elections, MPs who have been nominated by a federal state party from that state use negative campaigning in their speeches in the National Council to a greater extent than the other MPs.

2.4.4 System of government formation

This section deals with the question of what role the mode of government composition in a state plays for the election campaign in that state. More specifically, it examines the question of whether election campaigns – and thus also the corresponding disputes in the National Council – that are conducted under a *Proporz* system are characterised by less negative campaigning. As explained in 2.3.1, most of the Austrian federal states have put together their government in this way throughout their history. Following the amendment of some state constitutions, only Upper and Lower Austria still use this mode as of 2024. In such systems, the concept of opposition is limited to micro-parties that could not surpass the hurdle for government

participation (Pelinka and Rosenberger 2007, 239). The traditional task of the opposition to criticise the government programme is reduced to a minimum, as almost all parties are involved in the government. Decision-making processes in such countries are characterised by a high degree of concordance; conflicts in decision-making rarely occur (Dachs 2008, 92). Election campaigns break through this mode of intensive co-operation, but are rather seen as an uncomfortable necessity (Dachs 2008, 93): after the exchange of arguments, ideas and the battle for votes, the parties have to return to consensual decision-making, which has an inhibiting effect on the election campaign.

To better understand the strategic calculations of parties campaigning in a state with *Proporz* system when using negative campaigning, it is worth looking back at the comments on the attack behaviour of coalition partners. I argue that parties that are part of a *Proporz* government are held together by similar ties as coalition partners. It is generally argued that coalition partners are less likely to attack each other because they do not want to jeopardise the relationship with their partners and want to minimise post-election costs in the event of possible coalition renewal (Elmelund-Præstekær 2010; Hansen and Pedersen 2008; Walter and van der Brug 2013). This effect should be further strengthened by the security that the *Proporz* system provides in terms of government partners after the election.

Since participation in government in a state under *Proporz* system and thus the partial implementation of one's own convictions is already guaranteed in the run-up to the election, the policy and office preferences of the parties are less urgent or already partially secured. Due to relatively stable election results in states with *Proporz* system and historically constant party affiliation of the state governors (Pelinka and Rosenberger 2007, 241; Umek 2022, 106), the vote-seeking preferences of the parties are also curbed: the leadership of the government will most likely not change and there will be minimal shifts in the distribution of government seats in the extreme.

To summarise, it can be said that the already partially fulfilled policy and office preferences and the comparatively small gains from increased votes mean that parties refrain from harsh attacks on their political opponents during election campaigns in *Proporz* systems. The same mechanisms that inhibit attack behaviour between coalition partners take effect here and are even reinforced. The inhibition to use negative campaigning is transferred to speaking behaviour in the National Council and prevents the use of negative campaigning in the run-up to elections in countries with *Proporz* systems. The final hypothesis of this paper is therefore:

H12 In the run-up to elections in states with a *Proporz* system, members of parliament use negative campaigning in their speeches in the National Council to a lesser extent than before elections in states without such a system.

3. Data, operationalization, and method

This chapter first presents the data set based on which the hypotheses derived in the previous chapter are examined. In particular, reference is made to the various data sources used and how they were merged. Secondly, a procedure is outlined for identifying and measuring negative campaigning in parliamentary debates. Furthermore, the operationalization of the independent variables used is presented as well as the control variables considered in the multivariate model. Finally, the multivariate model employed is introduced and discussed regarding the structure of the data examined.

3.1 Case selection and used data

To answer the research question and test the hypotheses derived from the theory, speeches in the Austrian National Council between 2009 and 2019 are analysed. For this purpose, data from the *ParlEE* plenary speeches dataset (Sylvester, Greene, and Ebing 2022a) is used.¹⁸ This dataset contains the full text of 21.6 million plenary speeches at sentence level from a total of eight EU countries, including Austria. The dataset for Austria is based on the work of Rauh and Schwalbach (2020) and was edited and expanded by Sylvester, Greene, and Ebing. The sentences from the plenary speeches were annotated with the date of the speech, the name of the speaker, the party affiliation of the speaker, the policy area of the speech according to Bevan (2019) and a distinction as to whether the topic was European or domestic. In total, the data set for Austria contains 117,480 speeches or 1,526 million sentences from 536 speakers from nine parties.¹⁹ As the theoretical framework aims to explain the behaviour of MPs, the speeches of ministers and presidents are removed from the sample. Furthermore, the agenda items *beginning of the session* and *entry and assignment* were removed from the data set, as these are primarily administrative, highly standardized, and formal steps and do not correspond to the substantive debates and discussions on political issues.²⁰

Austria is a representative of a federal system that can be used to examine the influence of first- and second-order elections on the speaking behaviour of parliamentarians and the use of

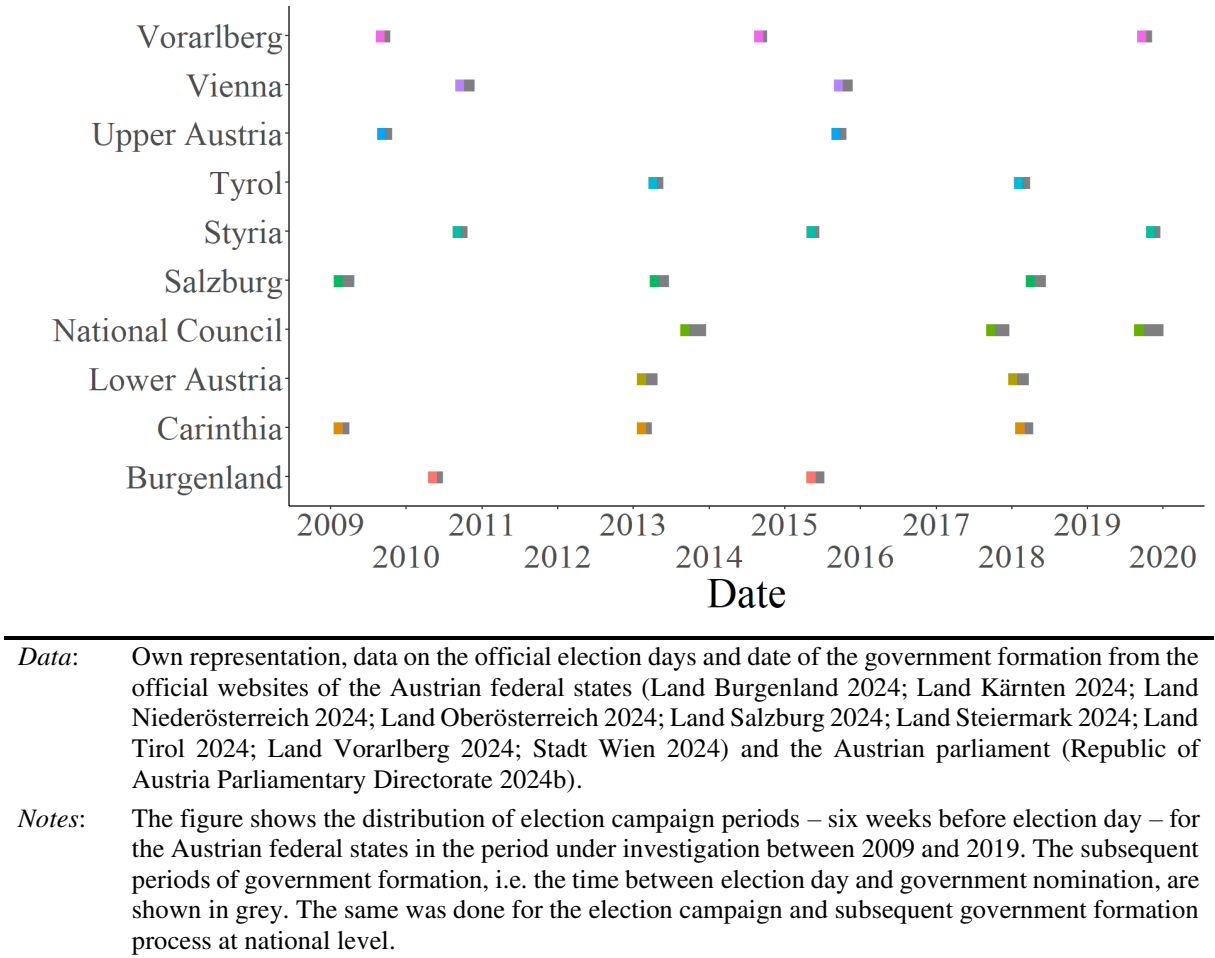
¹⁸ For more information on the procedure for collecting and cleaning the data as well as the subsequent coding, see the project's publication notes (Sylvester, Greene, and Ebing 2022b).

¹⁹ Namely BZÖ, FPÖ, the Greens, JETZT, NEOS, Others, ÖVP, SPÖ and Team Stronach.

²⁰ All other types of agenda items remain in the data set. These are general debates on government bills, initiative motions, parliamentary committee reports and reports by government agencies. They also include topical hours, urgent questions and motions, question times, short debates, closing remarks by the parliamentary presidents, requests to set up a committee of enquiry, reading of protocols and elections of parliamentary presidents. In my view, these points are more informal procedures and contain substantive disputes between the parties. They are therefore relevant for answering the research question.

negative campaigning in parliamentary debates. Austria was chosen because of my prior knowledge of the Austrian political system and the lack of comparable research on the use of negative campaigning in the National Council. The study is a useful addition to studies that have investigated the use of negative campaigning in parliamentary question times in the UK, Croatia and Belgium (Poljak 2023a, 2023b; Poljak and Walter 2023). Due to the case selection presented, a direct transfer to other federal systems is only possible after adaptation, as systemic factors and the organizational structure of the parties could vary. Nevertheless, the present study provides a template for studies in other federal states. The National Council was chosen as the arena of investigation in preference to the Federal Council, which as the second chamber is also part of parliament. Firstly, due to the political supremacy of the National Council over the Federal Council (Praprotnik 2023) and secondly, in view of the availability of data. Thirdly, the theoretical considerations in this work are geared towards the behaviour of members of parliament who want to be re-elected, which does not apply to members of the Bundestag, as they are delegated by the state governments (Praprotnik 2023, 171).

Figure 3.1: Election campaign and government formation in the states over time



By not sampling the speeches during this period, the representativeness of the study is maintained. Variance with regard to the factors investigated is present in the sample: a total of 22 state parliamentary elections and three National Council elections fall within the period under investigation. Complete temporal coverage of the debates between 2009 and 2019 ensures appropriate variance regarding the contextual factors. Figure 3.1 shows the temporal distribution of National Council and state parliament election campaigns and the subsequent government formation processes.

The data presented is supplemented with information on the members of the National Council (Republic of Austria Parliamentary Directorate 2024a), particularly with regard to their affiliation to state parties and their gender. In addition, the composition of the National Council at the respective time is added for each speech (Republic of Austria Parliamentary Directorate 2024b). Table 3.1 provides an overview of the composition of the National Council and the federal governments, as well as changes in the distribution of mandates. To control for the ideological distance between the target and sponsor of a strategic attack, data from the *Chapel Hill Expert Survey* (CHES) (Jolly et al. 2022a) is merged with the data. This survey uses expert assessments to record the party position about ideological and political convictions. As this survey is only available for Austria for the years 1999, 2002, 2006, 2010, 2014 and 2019, the positioning of the party is replaced with the value from the respective legislative period in each instance. As an equivalent measurement is not available for the JETZT list and for MPs without clubs; accordingly these speeches are removed from the sample. After this deletion, the sample contains 104,029 speeches or 1,33 million sentences from 432 speakers from seven parties.²¹

Finally, the composition of the respective state government is added for the periods of state parliamentary election campaigns. This data is taken from the official websites of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). The population size of the countries is also integrated into the study (Statistik Austria 2023) and supplemented by which state composes its government according to a *Proporz* system (Dolezal and Fallend 2023). The results of the state parliamentary elections held during the period under review, the changes to the previous election and the composition of the state governments can be found in table 3.2. It is also noted there whether the state government was composed according to the *Proporz* system and whether the governing coalition corresponds to the composition of the government at federal level.

²¹ Namely BZÖ, FPÖ, the Greens, NEOS, ÖVP, SPÖ and Team Stronach.

Table 3.1: Results of the National Council elections between 2009 and 2019

Election day	Name	Coalition	Nomination	ÖVP	SPÖ	FPÖ	Grüne	NEOS	PILZ	TS	BZÖ	Total
29.09.13	Faymann II	ÖVP/SPÖ	16.12.13	47 (-4)	52 (-5)	40 (+6)	24 (+4)	9 (+9)	0 (±0)	11 (+11)	0 (-21)	183
15.10.17	Kurz I	ÖVP/FPÖ	18.12.17	62 (+15)	52 (±0)	51 (+11)	0 (-24)	10 (+1)	8 (+8)	0 (-11)	0 (±0)	183
29.09.19	Kurz II	ÖVP/Grüne	07.01.20	71 (+9)	40 (-12)	31 (-20)	26 (+26)	15 (+5)	0 (-8)	0 (±0)	0 (±0)	183

Notes: The table contains the results of the National Council elections in the period under review between 2009 and 2019. The absolute seat results of the parties represented in the National Council during the period under review are shown. The changes compared to the previous election results are shown in brackets.

Table 3.2: Results of state elections in the Austrian states between 2009 and 2019

State	Election day	Pro- porz	Name	Coalition	Nomi- nation	ÖVP	SPÖ	FPÖ	Grüne	NEOS	TS	BZÖ	Total
Burgenland	30.05.10	Yes	Niessel III		24.06.10	13 (+0)	18 (-1)	3 (+1)	1 (-1)	0 (+0)	0 (+0)	0 (+0)	36
Burgenland	31.05.15	No	Niessel IV	SPÖ-FPÖ	09.07.15	11 (-2)	15 (-3)	6 (+3)	2 (+1)	0 (+0)	0 (+0)	0 (+0)	36
Kärnten	01.03.09	Yes	Dörfler II		31.03.09	6 (+2)	11 (-3)	0 (-16)	2 (+0)	0 (+0)	0 (+0)	17 (+17)	36
Kärnten	03.03.13	Yes	Kaiser I		28.03.13	5 (-1)	14 (+3)	6 (+6)	5 (+3)	0 (+0)	4 (+4)	2 (-15)	36
Kärnten	04.03.18	No	Kaiser II	SPÖ-ÖVP	12.04.18	6 (+1)	18 (+4)	9 (+3)	0 (-5)	0 (+0)	3 (-1)	0 (+0)	36
Niederösterreich	03.03.13	Yes	Pröll VI		24.04.13	30 (-1)	13 (-2)	4 (-2)	4 (+0)	0 (+0)	5 (+5)	0 (+0)	56
Niederösterreich	28.01.18	Yes	Mikl-Leitner II		22.03.18	29 (-1)	13 (+0)	8 (+4)	3 (-1)	3 (+3)	0 (-5)	0 (+0)	56
Oberösterreich	27.09.09	Yes	Pühringer IV		23.10.09	28 (+3)	14 (-8)	9 (+5)	5 (+0)	0 (+0)	0 (+0)	0 (+0)	56
Oberösterreich	27.09.15	Yes	Pühringer V		23.10.15	21 (-7)	11 (-3)	18 (+9)	6 (+1)	0 (+0)	0 (+0)	0 (+0)	56
Salzburg	01.03.09	Yes	Burgstaller II	SPÖ-ÖVP	22.04.09	14 (+0)	15 (-2)	5 (+2=)	2 (+0)	0 (+0)	0 (+0)	0 (+0)	36
Salzburg	05.05.13	Yes	Haslauer jun. I	ÖVP-Grüne	19.06.13	11 (-3)	9 (-6)	6 (+1)	7 (+5)	0 (+0)	3 (+3)	0 (+0)	36
Salzburg	22.04.18	No	Haslauer jun. II	ÖVP-Grüne	13.06.18	15 (+4)	8 (-1)	7 (+1)	3 (-4)	3 (+3)	0 (-3)	0 (+0)	36
Steiermark	26.09.10	Yes	Voves II		21.10.10	22 (-2)	23 (-2)	6 (+6)	3 (+0)	0 (+0)	0 (+0)	0 (+0)	56
Steiermark	31.05.15	No	Schützenhöfer I	SPÖ-ÖVP	15.06.15	14 (-8)	15 (-8)	14 (+8)	3 (+0)	0 (+0)	0 (+0)	0 (+0)	48
Steiermark	24.11.19	No	Schützenhöfer II	ÖVP-SPÖ	17.12.19	18 (+4)	12 (-3)	8 (-6)	6 (+3)	2 (+2)	0 (+0)	0 (+0)	48
Tirol	28.04.13	No	Platter II	ÖVP-Grüne	24.05.13	16 (+0)	5 (+0)	4 (+0)	5 (+1)	0 (+0)	0 (+0)	0 (+0)	36
Tirol	25.02.18	No	Platter III	ÖVP-Grüne	28.03.18	17 (+2)	6 (+1)	5 (+1)	4 (-1)	2 (+2)	0 (+0)	0 (+0)	36
Vorarlberg	20.09.09	No	Sausgruber IV	ÖVP	14.10.09	20 (-1)	3 (-3)	9 (+4)	4 (+0)	0 (+0)	0 (+0)	0 (+0)	36
Vorarlberg	21.09.14	No	Wallner II	ÖVP-Grüne	07.10.14	16 (-4)	3 (+0)	9 (+0)	6 (+2)	2 (+2)	0 (+0)	0 (+0)	36
Vorarlberg	13.10.19	No	Wallner III	ÖVP-Grüne	06.11.19	17 (+1)	4 (+1)	5 (-4)	7 (+1)	3 (+1)	0 (+0)	0 (+0)	36
Wien	10.10.10	No	Häupl V	SPÖ-Grüne	25.11.10	13 (-5)	49 (-6)	27 (+14)	11 (-3)	0 (+0)	0 (+0)	0 (+0)	100
Wien	11.10.15	No	Häupl VI	SPÖ-Grüne	24.11.15	7 (-6)	44 (-5)	34 (+7)	10 (-1)	5 (+5)	0 (+0)	0 (+0)	100

Notes: The table contains the results of the state elections in the period under review between 2009 and 2019. The absolute seat results of the parties represented in the National Council during the period under review are shown (except for PILZ, as it was not represented in any of the state parliaments listed). The changes compared to the previous election result are shown in brackets. The variable Proporz indicates whether the state government was appointed according to party *Proporz*. If the state government was not filled by *Proporz*, the ruling coalition was inserted.

3.2 Operationalization

This subsection now addresses how the concepts presented in the theoretical section can be measured using the data presented. The respective sections present the operationalization of the dependent (3.2.1), independent (3.2.2) and control variables (3.2.3). At appropriate points, different approaches to operationalization are discussed and the chosen proposal is justified accordingly.

3.2.1 Measuring negative campaigning in parliamentary debates

To successfully measure negative campaigning in parliamentary debates, two steps are necessary: firstly, a way is needed to measure the extent of negativity in a statement. Secondly, it is necessary to find out who is being talked about or addressed in the statement. Let's start with the first step: to measure the extent of negativity in a statement, I use an approach developed by Haselmayer and Jenny (2017) for the sentiment analysis of German texts. Sentiment analysis is an (automated) assignment of text unit properties to numerical values for the purpose of quantifying the occurrence, strength and frequency of these units (Lengauer, Esser, and Berganza 2012, 183). This method is particularly helpful in the study of negative campaigning and is widely used (Geer 2006; Kahn and Kenney 2004; Lau and Pomper 2004; Nai and Walter 2015).

In Haselmayer and Jenny's approach, crowd-coding (K. Benoit et al. 2016) of party press releases, media reports and parliamentary debates from the period 1995-2013 was used to estimate the sentiment score first of sentences and subsequently of individual words. Only the range of neutral to negative words is covered. The authors (Haselmayer and Jenny 2017, 2625) justify this by asymmetries between positive and negative evaluations (Baumeister et al. 2001; Peeters and Czapinski 1990; Rozin and Royzman 2001) so that a positioning on a continuous axis from positive to negative values does not appear to make sense. Furthermore, no distinction is made between types of negative emotions (Ekman 1992). This results in a measurement of the negativity of individual words on a continuous, one-dimensional sentiment scale.

A selection of relevant words results in a dictionary of 5001 words with associated sentiment strength (Haselmayer and Jenny 2020).²² Such crowd-coding approaches provide promising results when analysing political content, comparable to the assessments of experts or trained coders (K. Benoit et al. 2016; Horn 2019), especially when analysing sentiments (van Atteveldt,

²² For the researchers' specific approach, see the associated published paper (Haselmayer and Jenny 2017) and the documentation accompanying the dictionary (Haselmayer and Jenny 2020). The mean word score is chosen as the sentiment score. The variable contains the negativity score for each dictionary entry based on the mean score of each sentence and the mean score of all sentences containing the word.

van der Velden, and Boukes 2021; Taboada et al. 2011). Exemplary empirical studies (Haselmayer and Jenny 2017) and analyses of party press releases (Haselmayer and Jenny 2018) show the appropriateness of the approach in the investigation of negative statements.²³ By controlling for the socio-demographic backgrounds of the coders (Haselmayer and Jenny 2017, 2626), a representative assessment of the negative intensity of individual words is possible. Referring to the definition of negativity used in this paper, where everything is negative that is generally perceived as such, the presented approach offers an appropriate operationalization of negativity.

To determine the negativity of the sentences from the parliamentary speeches based on the presented dictionary,²⁴ I follow Haselmayer and Jenny (2017, 2630–31): based on the *bag-of-words* assumption (Laver, Benoit, and Garry 2003; Monroe, Colaresi, and Quinn 2017; Slapin and Proksch 2008), i.e. that sentences can be represented as a collection of unordered words, the first step is to check which words from the dictionary are contained in the sentence to be analysed. If no words from the dictionary are included, the sentence is assigned the negativity value zero. To avoid falsified measurements due to negations, a check is made to see whether the word preceding the negative word is a negation word. If this is the case, the negativity score is set to zero.²⁵ To consider an increased intensity of the negative scores due to presented words, a check is also made for so-called intensifiers.²⁶ If an intensifying word precedes a negative word, the corresponding negativity score is multiplied by 1.25 (Taboada et al. 2011). Finally, the maximum (Thelwall and Buckley 2013) of the sentiment scores of the words in the investigated sentence is determined and assigned to the sentence as the respective negativity score. Figure 3.2 provides an overview of the most frequently identified negative words.

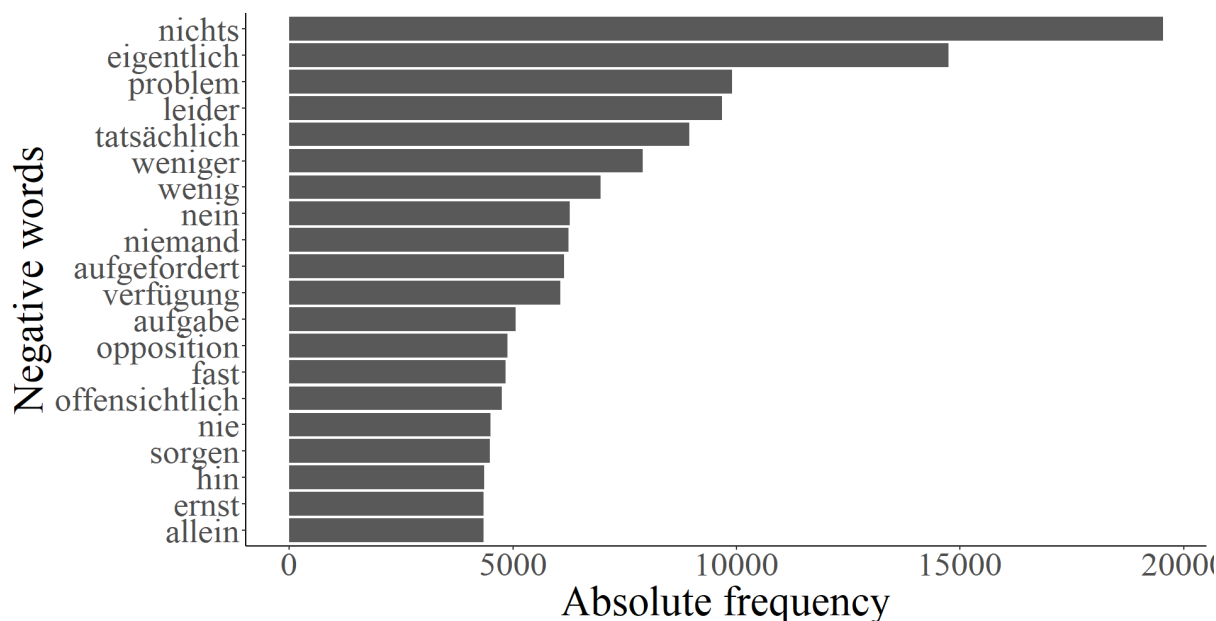
²³ Alternatively, the training of a neural network based on training data is also proposed in order to calculate the sentiment score of statements (Haselmayer, Dingler, and Jenny 2022; Haselmayer and Jenny 2018; Rudkowsky et al. 2018). In view of the appropriateness of the presented approach for empirical studies and the excessive scope of building such a neural network, such an analysis is not carried out in this study.

²⁴ This step is based on the assumption that the dictionary used contains all relevant words to analyse the new text (Haselmayer and Jenny 2017, 2626). If this is not the case – e.g. if the dictionary was obtained from one type of text data and is transferred to another domain – the result is an increase in errors (Soroka, Young, and Balmas 2015, 112). Instead, the dictionary used in such a project should be adapted accordingly (González-Bailón and Paltoglou 2015; Grimmer and Stewart 2013; Loughran and McDonald 2011; Soroka, Young, and Balmas 2015). Since the dictionary used in this paper was compiled based on Austrian parliamentary speeches, party statements and media reports, I assume that a transfer to the analysis of (more recent) speeches in the National Council is possible without hesitation.

²⁵ The collection of negations proposed by Haselmayer and Jenny (2017) was supplemented with additional words (Wiegand, Wolf, and Ruppenhofer 2018). I also obtained additional terms from ChatGPT (OpenAI 2024). An overview of the negations used can be found in the appendix in table A.1.

²⁶ As with the negations, the collection of intensifiers proposed by Haselmayer and Jenny (2017) is supplemented by additional words. Here, again, reference was made to existing literature (Klenner, Fahrni, and Petrakis 2009) and ChatGPT (OpenAI 2024). The collection of intensifiers used can be found in the appendix in table A.1.

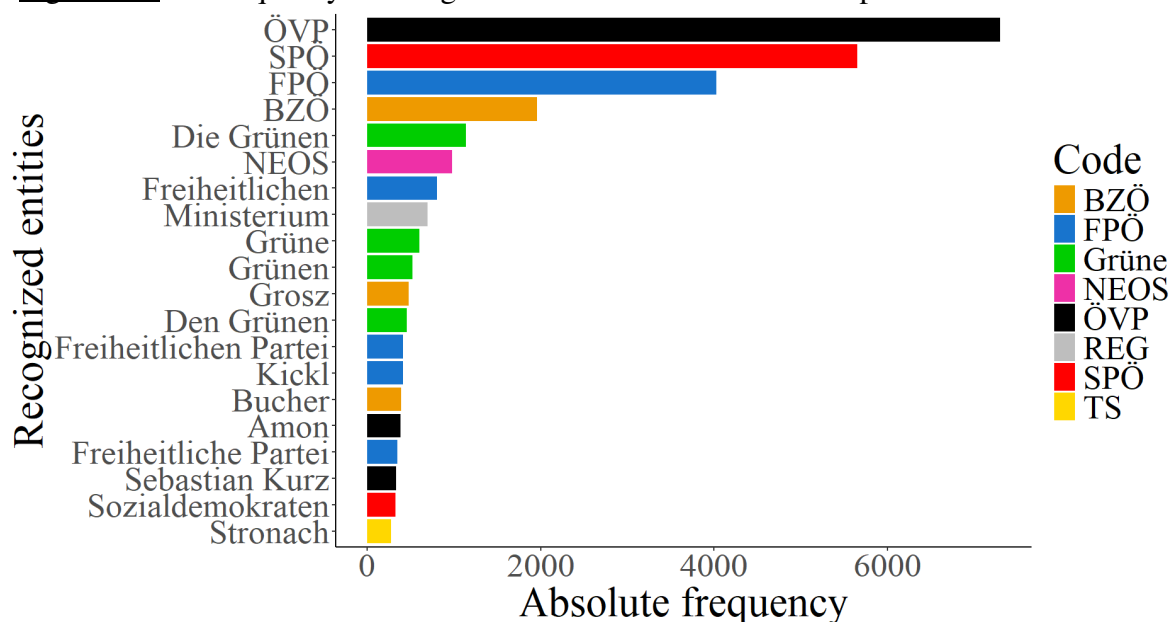
Figure 3.2: Frequency of recognized negative words in the *ParLEE* corpus



Data: N = 1368938; own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary provided by Haselmayer and Jenny (2017).

Notes: The figure shows the absolute frequencies of the 20 most common negative words recognized in the data set. In total, the 5001 words coded by Haselmayer and Jenny (2017) were detected 143942 times.

Figure 3.3: Frequency of recognized entities in the *ParLEE* corpus



Data: N = 1368938; own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the spacyr package (K. Benoit, Matsuo, and Gruber 2023).

Notes: The figure shows the absolute frequencies of the subjects identified in the data set that could be assigned to a party in the National Council. The colouring of the bars represents the assignment of these terms to the parties in the National Council. In total, the identified and coded entities were recognized 62645 times in the text corpus examined.

Named Entity Recognition (NER) is used to take the second step and automatically determine who is being talked about in a statement. NER refers to the automated recognition and identification of named organizations, persons or locations using a neural network (Nadeau and Sekine 2009, 3). For this thesis, the software library *spacy* (Honnibal 2024) – which is written in Python and Cython, but can be made usable for R with *spacyr* (K. Benoit, Matsuo, and Gruber 2023) – is used.²⁷

The linguistic analysis of the data in our case provides named organizations and persons. All entities that were mentioned more than four times in the text corpus analysed are considered. The text corpus includes all sentences with a sentiment score above zero. This provides 1740 identified organizations and 2039 named persons. These entities are then manually assigned to the parties represented in the National Council or sorted out if they cannot be assigned or the associated party is not represented in the National Council. In the event that the federal government is addressed in general, the respective sentence is doubled and in each case a coalition partner of the current government is inserted as the target of the statement. Entities that cannot be clearly assigned to a party are removed or, in the case of ambiguous surnames, the respective first name is added and corresponding copies are created for persons with the same surname. Where persons are identified who were assigned to several parties during the period under review, the party to which the person belonged for the longest time during the period under review is coded.²⁸ This results in a total of 1039 identified and assigned entities. An overview of the most frequently identified named entities can be found in figure 3.3.

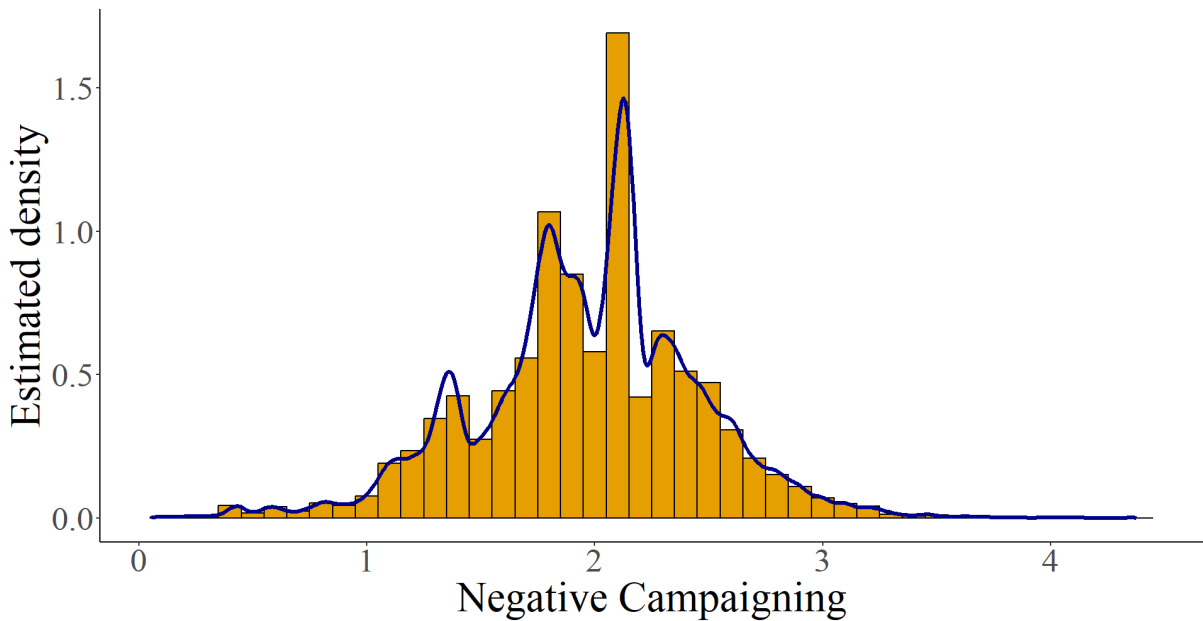
All sentences from the National Council speeches examined that have a sentiment score different from zero are now matched with the identified entities. If only one entity is addressed, the assigned party is coded as the target. If more than one party is targeted, the case is duplicated by the number of parties targeted and then in each of the duplicated cases one of the parties is coded as the target of the attack. If none of the coded entities in the sentence are addressed, the

²⁷ For an overview and step-by-step instructions for the use of *spacyr*, see Puschmann (2021).

²⁸ In view of the large number of records to be encoded, such an approach offers a cost-efficient method of identifying attacked parties and entities. However, this comes at the cost of several disadvantages and drawbacks: First, this method does not capture the context in which an entity is addressed. For example, the negative sentiment of the sentence could be limited to one half-sentence, while the entity is mentioned in another. Secondly, the assignment of persons who have changed their party is unsatisfactory and may result in incorrectly assigned attacks. More sophisticated coding should therefore consider the time of the attack and the time of the party change when identifying the attacked entities. Thirdly, attacks directed against the government are interpreted as being equally directed at the two coalition partners, which does not necessarily correspond to reality. Here too, a more precise analysis of what is said would improve the measurement quality of the attacks and their targets. Fourthly, in cases where entities of different parties are addressed, it is assumed that the negative sentiment is directed against all these parties to the same extent. Again, it is quite possible that one party is addressed negatively in a half-sentence, while the other parties are only mentioned elsewhere in the sentence or even addressed positively.

sentiment score of the sentence is set to zero. This results in a measurement of negative campaigning, whereby the combination of the entity addressed and a non-zero negative sentiment score can be interpreted as an act of negative campaigning. The distribution of negative sentiment scores conditional on a party being addressed can be found in figure 3.4. In total, 7.06% of the sentences analysed were coded as acts of negative campaigning.²⁹

Figure 3.4: Histogram of the intensity of negative campaigning in debates of the National Council



<i>Data:</i>	N = 96620; Own calculation based on data from the <i>ParLEE speeches</i> dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Data set reduced to all statements which have a sentiment score other than zero and in which an entity is addressed.
<i>Notes:</i>	The figure shows a histogram of negativity in debates of the Austrian National Council conditional on the fact that a party was addressed in the statement. The bin width is set to 0.1. A kernel density estimator ($\alpha = 0.1$) in dark blue was added.

²⁹ Compared to the other party communication channels, this figure is at the lower end of the scale. For instance, studies for Austria show that an average of 41% of party press releases contain negative campaigning (Dolezal, Ennser-Jedenastik, and Müller 2015, 2017). Other studies even provide figures of over 60% (Rusmann 2017). These proportions are lower for advertising in newspapers, where only just under 35% of adverts contain attacks against political opponents (ibid.). Fewer attacks are made on social media: studies on the 2019 National Council elections show that an average of 11% of Facebook posts and 16% of Twitter posts contain negative campaigning (Lehrner 2021). This figure is lowest for the election programmes of political parties, where only 3% of statements are directed negatively against the other parties (Dolezal et al. 2018). Since the primary aim of parliamentary debates is not election advertising but the discussion of policies and, in contrast to the other studies, not only periods of the election campaign are examined, I assume that this calculated proportion is a realistic estimate of the true value.

3.2.2 Independent variables

To examine the influence of the election campaign for the National Council on speaking behaviour and specifically the use of negative campaigning in the National Council, the period of the election campaign was set to the six weeks before election day. This follows considerations of studies on the use of negative campaigning in Austria, which examine the last six weeks before the election date when examining party press releases (Dolezal, Ennsner-Jedenastik, and Müller 2016, 2017). This results in a dichotomous variable that takes the value one if the speech was made in the six weeks before the election. The time of government formation at national level was operationalized in the same way: if the corresponding speech was made in the period between election day and the commencement of government, the variable takes the value one.³⁰

This approach cannot be transferred to the state level without adaptation, as in some cases several state election campaigns take place or state governments are formed at the same time. To integrate this circumstances into the operationalization approach, consider the following formula: in this simplified example, the dependent variable y is modelled as a function of two independent variables at state level x_A and x_B , which indicate whether an election campaign is taking place in the respective state A or B at a given point in time.

$$y = \alpha + \beta_{Land\ A} x_A + \beta_{Land\ B} x_B + \epsilon = \alpha + \beta_{Land} (x_A + x_B) + \epsilon$$

Since, as described in the theory section, holding all other variables constant, the effect of the two variables is the same ($\beta_{Land\ A} = \beta_{Land\ B} = \beta_{Land}$) it follows that the presence of state parliament election campaigns at a certain point in time can be operationalized as a count variable that measures the number of state parliament election campaigns at a point in time. For the state level, it is again assumed that election campaigns take place in the last six weeks before the election date. As with the measurement of state election campaigns, government formation processes are also cumulated.

Following these considerations, incumbency, and opposition affiliation in the states where an election is pending is also measured as the number of states in which the speaker's party is part

³⁰ At this point, it should be noted that the effect of the election campaign and government formation process on the use of negative campaigning may not be constant but varies in strength over time. It is possible, for example, that negative campaigning increases towards the end of the election campaign, as parties that are behind become more willing to take risks (Kahneman and Tversky 2012; Skaperdas and Grofman 1995). Similarly, it is possible that the closer the government takes office, the clearer the relationship between the opposition and the government becomes, whereby the pacifying effects of the government formation process increasingly diminish. Due to the lack of more precise theoretical assumptions and empirical studies, I will rely on a dichotomous variable at this point and leave possible refinements to theorization as well as operationalization to future research.

of the government respectively part of the opposition. Where there is a *Proporz* system³¹ for appointing the state government (Ucakar, Gschiegl, and Jenny 2017, 143–44), all parties that provide at least one state councillor there were coded as incumbents.³² At the national level, on the other hand, a dichotomous variable is used to distinguish whether the speaker’s party is part of the government or the opposition.³³ The effect of coalitions at the federal level is represented as an interaction effect between the incumbency of the attacker and the target of the attack. At state level, to be able to consider the simultaneity of state elections, a count variable must again be used to count the number of states in which the attacker and sponsor are part of the government during an election campaign.

To integrate the origin of the MP into the model, it is checked for each speech whether the speaker has been included on the electoral list by a state party (Republic of Austria Parliamentary Directorate 2024a) and whether a state parliamentary election campaign is currently taking place in the respective state. Finally, the operationalization of the *Proporz* system is addressed: here again, in view of the previous considerations, a cumulative measurement is made, meaning that at the time of the speech, the number of countries in which elections are soon to be held and which compose their government according to a *Proporz* system is counted.

3.2.3 Controls

To control for potential confounding effects on the dependent variable and their relationship to the independent variables, several control variables are included in the statistical model. In this way, distortions caused by unobserved variables are reduced and the precision of the estimated

³¹ In some Austrian federal states, the state governments are composed according to a *Proporz* system. This means that all parties represented in the state parliament above a certain minimum size are represented in the state government. After 1945, this applied to all federal states except for Vorarlberg and Vienna. Since then, many federal states have adapted their respective state constitutions to abolish the proportional representation system (Ucakar, Gschiegl, and Jenny 2017, 143–44): Tyrol and Salzburg, for example, have not held elections based on the *Proporz* system since 1999, Styria and Burgenland since 2015 and Carinthia since 2018. Only Upper and Lower Austria still appoint their state governments according to this principle.

³² For Carinthia, *Die Freiheitlichen in Kärnten* (FPK), the regional group of the FPÖ in Carinthia, is counted as part of the FPÖ from 2009 on, following its split from the BZÖ. This is due to the rapprochement between the FPK and FPÖ in terms of both name and position, which first culminated in their alliance in 2009 and the subsequent reintegration into the FPÖ in 2013 (Heinisch and Hauser 2015, 104).

³³ In times of government formation, all parties represented in the National Council are assigned the value 0 in the dichotomous variable, as none of the parties are currently in office. This also applies to the Bierlein government, which was the acting federal government of the Republic of Austria as an expert government from 3 June 2019 to 7 January 2020. As a civil servant government, it continued to manage the official business of the federal ministries until the Kurz II government was sworn in after the early National Council elections in autumn 2019.

parameters is increased. This aims to increase the generalizability of the results (Hünermund and Louw 2023).

Firstly, the context variable considered is whether an election campaign for the EU election was taking place at the time the speech was given. This was the case in 2009, 2014 and 2019 during the study period. Analogous to the considerations according to which state parliament and national council elections have an influence on speaking behaviour in parliament, EU election campaigns should therefore be controlled for, since these election campaigns are also characterized by the use of negative campaigning (Baranowski et al. 2023; Klinger, Koc-Michalska, and Russmann 2023; Nai et al. 2022). Analogous to the state parliament and national council election campaigns, EU election campaigns are understood to be the six weeks before election day. At the level of the federal states, the significance of state elections is controlled for. For this purpose, the population size of the country in which the election takes place is included in the model (Statistik Austria 2023). This is reflected in the general importance of the country in Austria's institutional structures, such as the Federal Council or the Conference of State Governors and indicates the importance for the parties in terms of membership and financial resources. If several state parliamentary election campaigns are taking place at the time of a speech, the population size of these states is summed up.³⁴

At the party level, the ideological distance between the attacking and attacked party is controlled for. Empirical studies show that parties that are further apart engage more in mutual attacks (Dolezal, Ennser-Jedenastik, and Müller 2015; Elmelund-Præstekær 2008; Poljak and Walter 2023, 2023), as ideological distance is associated with strong disagreement on key issues, which in turn favours ideological attacks (Geer 2006, 2012; Nai 2020, 435–36). Data from the CHES (Jolly et al. 2022a) is used to measure the ideological distance, whereby one distance measurement was taken into account with regard to the economic axis and one with regard to the cultural axis.³⁵ In addition, the topic spoken about in the National Council and noted in the *ParLEE* data set (Sylvester, Greene, and Ebing 2022a) is controlled for. Following

³⁴ It is also conceivable that the influence of regional elections varies with local particularities, such as local scandals that have such an impact that they radiate to the national level. An example of this would be the Hypo Alpe Adria affair and the accusation of hidden party funding (cf. Schnauder 2010). Such a scandal could have influenced the extent of negative campaigning in the run-up to the Carinthian state elections in 2013. A more detailed examination of such contexts at the state level would be desirable for these reasons but is beyond the scope of this work and is therefore excluded.

³⁵ To measure the ideological distance between the sponsoring party and the targeted party, the *lrecon* and the *galtan* variables of the CHES is used, which measure the positioning of the party on the economic right-left axis respectively their positioning on the social-cultural axis. The *lrecon* variable takes values on the spectrum 0 = *extreme left*, via 5 = *centre* to 10 = *extreme right* whereby the variable *galtan* takes values from 0 = *Libertarian/Postmaterialist*, via 5 = *centre* to 10 = *Traditional/Authoritarian* (Jolly et al. 2022b, 22–23).

the issue-ownership theory (Budge and Farlie 1983; Petrocik 1996), it is theorized that parties attack their political opponents on issues that belong to them to expose their weaknesses (Geer 1998) or to increase the credibility of the attack (Damore 2002; Riker 1996). Furthermore, the seat share of the attacked party is considered (Republic of Austria Parliamentary Directorate 2024b) to control for the empirical asymmetry between sponsor and target of negative campaigning. Empirical evidence shows that large parties usually ignore small parties, as the electoral impact of an attack against a small opponent is negligible (Skaperdas and Grofman 1995; Walter 2014a). In addition, potential retaliation by parties against previous political attacks is controlled for. Since the speeches do not take place in isolation but can refer to previous speeches on the day (Haselmayer, Dingler, und Jenny 2022, 868), the number of attacks launched against the speaker’s party on that day up to the time of the speech is controlled for. This reciprocity effect is explained by the fact that parties respond to other parties’ attacks with attacks of their own (Damore 2002; Dolezal, Ennser-Jedenastik, and Müller 2016, 2016; Druckman, Kifer, and Parkin 2010; Song, Nyhuis, and Boomgaarden 2019).

At the individual level, the gender of the speaker is controlled for, as empirical studies have shown that women on average use less negative language than their male colleagues due to their socialization (Ennser-Jedenastik, Dolezal, and Müller 2017; Haselmayer, Dingler, and Jenny 2022; Wissik and Hofmann 2023). The gender of the speaker is obtained from data of the Austrian Parliamentary Directorate (Republic of Austria Parliamentary Directorate 2024a). Finally, the date of the speech is controlled for, which can be found in the *ParLEE* dataset (Sylvester, Greene, and Ebing 2022a). This is based on empirical studies that show a generally time trend in the use of negative campaigning (Fowler and Ridout 2013; Geer 2012; Jamieson, Waldman, and Sherr 2000; Johnston and Kaid 2001). Finally, we control for the party affiliation of the speaker to account for average differences in the use of negative campaigning between the parties. An overview of the independent, dependent, and controlling variables can be found in table A.2 in the appendix.

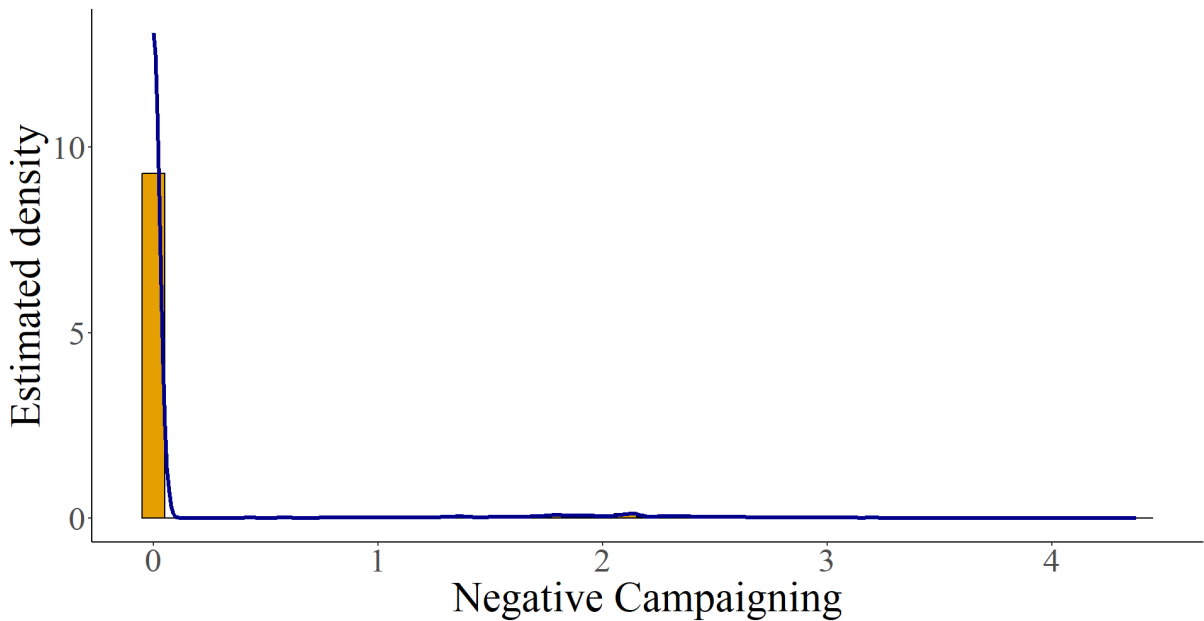
3.3 A two-part model for analysing negative campaigning

To motivate the model used to test the hypotheses presented in the theory section, some special features of the structure of the data examined, but also of the theoretical considerations, should be pointed out. Firstly, the data is characterized by the fact that negative campaigning occurs comparatively rarely: as can be seen in figure 3.5, most of the sentences examined are neutral or have a negativity value of zero.³⁶ Only 7.06% of the entries in the data set are negative

³⁶ This is either because no entity was addressed in the sentence, or no negativity was measured.

campaigning. Secondly, it should be noted that hypotheses 7 to 10 examine the role of the target in the use of negative campaigning. Therefore, these hypotheses can only be examined for cases in which negative campaigning actually occurs. Third, negative campaigning is operationalized as a continuous variable. It follows that a model is needed that can both process the large number of neutral statements and make an analytical separation between observations in which negative campaigning is evident and all other observations. At the same time, the model must be able to consider the continuous nature of the dependent variable. Fourthly, the data set is characterized by a hierarchical data structure: consequences of this structure must be addressed and taken into account in the model.

Figure 3.5: Histogram of negative campaigning in debates of the National Council



Data: N= 1368938; Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023).

Notes: The figure shows a histogram of negativity in debates of the Austrian National Council conditional on this. The bin width is set to 0.1. A kernel density estimator ($\alpha = 0.1$) in dark blue was added. In total, there are 96620 statements in the data set that have a sentiment score other than zero and in which an entity is addressed. The remaining cases therefore have a zero for the dependent variable negativity.

Due to the structure of the dependent variable, the use of standard statistical analysis methods such as OLS regression is not possible. As can be seen in figure 3.5, a distribution is generated for the negativity of the sentences that has a centre of mass at zero with a long right-tail distribution. Common statistical methods have difficulty in modelling such a distribution (Min and Agresti 2022, 8), especially in predicting zeros and estimating model coefficients appropriately (Belotti et al. 2015, 3). In contrast, a model is required that makes an analytical distinction between zeros – no use of negative campaigning – and positive values – the intensity

of the attack, if an attack was launched. One possible answer to this problem is the two-part model (N. Duan et al. 1983), a representative of a mixture model (Belotti et al. 2015).³⁷ In such a model, the data is understood as the result of the mixture of two distributions: one that distinguishes between zero values and positive values, and one that models the extent of positive values conditional on being a positive value (L. Liu et al. 2019, 256; Min and Agresti 2022, 11). Consequently, zeros and non-zeros are modelled in two separate processes (Belotti et al. 2015, 3–4): first, a binary selection model is fitted for the probability of observing a positive or a zero outcome. Then, conditional on a positive outcome, a suitable regression model for the positive outcome is fitted.³⁸

In this way, the analytical separation of the hypotheses examined can be considered. In the first part of the model, the general decision to use attacks in National Council speeches is examined. This covers all hypotheses that are not directly related to the role of the target of an attack. In the second model, all hypotheses presented in the theory chapter are then examined. In this case, the hypotheses are interpreted in such a way that a stronger extent of negative campaigning is characterized by an increased probability of an attack, but also by a higher intensity of the attack. Hypotheses 7 to 10, which include the role of the target of an attack, are tested in the second part of the model alone.

The advantages of such a two-part model over two separate estimates are, firstly, that different formulas are permitted for the two parts, and in this way different variables can be included (Belotti et al. 2015, 18). Secondly, joint statistical tests – where appropriate – can be carried out for the calculated parameters that appear in both parts. Third, predictive values for the dependent variable can be calculated based on both parts of the model. Fourth, standard errors are automatically calculated for the predicted values and marginal effects that take both parts of the model into account (Belotti et al. 2015, 5).

The collected data is analysed using the statistical program R (R Core Team 2022). More precisely, the package introduced by Belotti et al. (2015) for the statistical software Stata and made available for R by Y. Duan et al. (2022) for R is utilised. The first part of the two-part model is a binomial regression model. The logit function was chosen as the link function. This first model examines the distinction between zeros and generally positive values, i.e. which

³⁷ At this point, it should be noted that the zeros in the presented data are interpretable results, as they represent the decision not to engage in negative campaigning. Therefore, truncated regression models are not suitable for the analysis of such data and the use of two-part models is recommended (Liu et al. 2019; Min and Agresti 2022).

³⁸ Such models are used, for instance, in the study of health expenditure (Belotti et al. 2015, 10; Deb and Norton 2018), but also in political science studies, e.g. in the study of left-wing authoritarianism and political violence (Costello et al. 2022).

factors influence the use of negative campaigning. The second part of the model is a generalized linear model (GLM), which is used to examine the strength of the positive values. The Gaussian family was used as the link family due to the distribution of the non-zero sentiment scores. Specifically, the factors influencing the extent of negative campaigning are examined here. Finally, I would like to discuss the structure of the data and its significance for the model selection. The analysed sentences are clustered into several groups: they belong to speeches, which in turn belong to speakers, which in turn are clustered into parties. On the other hand, speeches could also be assigned to individual session dates. It is possible that the presented effects of the independent variable on the dependent variable differ between these clusters. In such cases, a multilevel approach combining within-group and between-group relationships is more reliable (Snijders and Bosker 2012, 17). Analysing the data at the existing, disaggregated level without considering the groups in which they are organized can produce incorrect and unreliable results. For instance, such disregard in the investigation of differences within groups leads to unnecessarily conservative testing and thus the retention of null hypotheses that should actually be rejected (Berkhof and Kampen 2004). At the level of between-group differences, such an approach often leads to the hasty acceptance of alternative hypotheses, although this does not emerge from the data if the model would be correctly specified (Snijders and Bosker 2012, 17).

Unfortunately, I am currently unaware of any way of implementing the grouped structure of the data in a two-part model in R.³⁹ Due to the structure of the data and in particular the dependent variable, as well as for the reasons mentioned above, I will nevertheless calculate a two-part model to analyse the hypotheses.⁴⁰ Instead, I will control for the time and party of the speaker in the model to take the average effects of time and party into account.

³⁹ Appropriate mathematical models have already been presented (Farewell et al. 2017; Robinson, Zeger, and Forrest 2006), but have not been implemented in R to date.

⁴⁰ Alternatively, it would be possible to split the model into two models and consider the groups accordingly. To avoid reproducing incorrect results, an isolated model with hierarchical effects is reproduced separately for the logit model (Part 1) and the GLM (Part 2) for control purposes.

4. Results and discussion

This chapter presents the results of the empirical analysis of the data presented in the previous chapter. To better understand the distribution of the relevant independent and dependent variables, the first subchapter presents pertinent statistical measures and charts. Subchapter 4.2 then introduces bi- and trivariate analyses, which in a first step shed light on the relationship between the independent variables and the use of negative campaigning in National Council debates. The results of the calculated two-part model are then presented in the final sub-chapter. In addition to the evaluation of the hypotheses, the goodness of fit of the model to the data is discussed.

4.1 Descriptive analysis

In this section, a selection of descriptive statistics is used to present the data set described in the third chapter. In addition to statistical measures for the independent variables and the dependent variable, graphs are provided to help understand the distribution of them. Table 4.1 contains statistical measures of the dependent variable and some of the independent variables. Since the population based on which the descriptive statistics are calculated here is all cases contained in the data set, calculations were only carried out for variables that are not dependent on the target of an attack or are only relevant during election campaigns at state level. In addition to the mode, i.e. the most frequent expression of the variable, the arithmetic mean, the maximum and minimum as well as the quartiles were calculated where appropriate.

As already seen in the previous chapter, the calculated measures show that the dependent variable negative campaigning is strongly concentrated on the value 0 and positive values on the sentiment scale are the exception. Furthermore, it shows that most speeches take place in ordinary political context: of the sentences spoken, only 1.64% took place during the formation of a coalition at national level and 2.35% during an election campaign at national level. Due to the empirical frequency of state elections and their location in the national legislative periods, more sentences are spoken in the context of state election campaigns (15.34%) and government formations (16.70%). The figures also show that up to two election campaigns or three government formation processes took place at sub-national level at the same time as the speeches. Finally, the mean value for the incumbent variable shows that just under half (47.35%) of the sentences spoken were uttered by members of the national governing parties.

Table 4.1: Statistical measures for the included variables for all cases

Variable	Mode	Mean	Max	Min	p25	p50	p75
Negative Campaigning		0.1388	4.375	0	0	0	0
Campaign National Council	0	0.0237			0	0	0
Government formation National Council	0	0.0164			0	0	0
Campaign federal state	0		2	0	0	0	0
Government formation federal state	0		3	0	0	0	0
Incumbency status sponsor national level	0	0.4735			0	0	1

Data: N = 1368938. Data from the *ParlEE plenary speeches* Datensatz (Sylvester, Greene, and Ebing 2022a), the *Chapel Hill Expert Survey* (Jolly et al. 2022a), the National Council Austria (Republic of Austria Parliamentary Directorate 2024a, 2024b) and state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Own computation using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023).

Notes: For categorical variables, the mode was calculated. For all ordinal variables, the maximum (Max), minimum (Min), 25% (p25), 50% (p50) and 75% (p75) quantiles were additionally calculated. For all dichotomous variables the mean is also calculated and can be interpreted as the proportion of values coded with one in the entire sample. All variables that can only be calculated for observations where negative campaigning was found or only occur in periods of state election campaigns were omitted from these calculations.

After a general look at the data set, we now turn to the distribution of the relevant variables when the data set is reduced to attacks against parties represented in the National Council. This serves to prepare the second part of the two-part model. As already shown in figure 3.4, the sentiment scores of the negative campaigning acts are concentrated around the value two and vary between 0.0556 and 4.3750. The quartiles indicate a symmetrical distribution around the mean value. As in the analysis of all cases, most attacks are made in ordinary political context. Only a small proportion are made during national election campaigns (1.28%) or during coalition-building processes at national level (2.29%). For state election campaigns and government formation processes at state level, these figures are again higher at 15.75% and 16.63% respectively.⁴¹ Compared to all spoken sentences, the measurement figures differ only marginally, which indicates an equal distribution of attacks with regard to times of election campaigns and government formation. There are differences regarding the sponsors of attacks: only 29.83% of the attacks come from members of the national governing parties. Furthermore, 73.57% of the attacks are directed at the national governing parties and only 14.48% of the attacks take place between national coalition partners.

⁴¹ These measures are not shown in table 4.2 but were calculated separately.

Table 4.2: Statistical measures for the included variables for all attacks

Variable	Mode	Mean	Max	Min	p25	p50	p75
Negative Campaigning		1.9670	4.3750	0.0556	1.7091	2.0000	2.2583
Campaign National Council	0	0.0229			0	0	0
Government formation National Council	0	0.0128			0	0	0
Campaign federal state	0		2	0	0	0	0
Government formation federal state	0		3	0	0	0	0
Incumbency status sponsor national level	0	0.2983			0	0	1
Incumbency target national level	1	0.7357			0	1	1
Coalition at national level	0	0.1448			0	0	0

Data: N = 96620. Data from the *ParLEE plenary speeches* Datensatz (Sylvester, Greene, and Ebing 2022a), the *Chapel Hill Expert Survey* (Jolly et al. 2022a), the National Council Austria (Republic of Austria Parliamentary Directorate 2024a, 2024b) and state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Own computation using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: For categorical variables, the mode was calculated. For all ordinal variables, the maximum (Max), minimum (Min), 25% (p25), 50% (p50) and 75% (p75) quantiles were additionally calculated. For all dichotomous variables the mean is also calculated and can be interpreted as the proportion of values coded with one in the entire sample. All variables that can only be calculated for observations in periods of state election campaigns were omitted from these calculations.

To examine all variables that can only be interpreted in the light of state election campaigns and an attack, table 4.3 again calculates statistical measures for attacks carried out during a state election campaign. As separate calculations show, 21.61% of these attacks take place during coalition-building processes at state level. Furthermore, 21.82% of attacks take place between parties that are incumbents in countries where elections are held. In total, 43.00% of the attackers are members of government in a country where an election campaign is taking place at the time of the speech. Similarly, 74.44% of the targets are part of such a state government. It is also striking that 11.34% of the attacking MPs were nominated for the National Council by a state party in whose state an election campaign was taking place at the time of the speech. Compared to the values in table 4.2, there are no significant differences in the distribution of the negative campaigning variable. The share of national office holders in the sponsors and targets of the attacks is also comparable. Overall, this indicates that attacks during state election campaigns follow the same trends as attacks in general during the period under investigation.

Table 4.3: Statistical measures for the included variables for all attacks during campaigns in federal states

Variable	Mode	Mean	Max	Min	p25	p50	p75
Negative Campaigning		1.9667	3.8750	0.0667	1.7091	2.0000	2.2683
Campaign National Council	0	0.0367			0	0	0
Government formation National Council	0	0.0104			0	0	0
Campaign federal state	0		2	0	0	0	0
Government formation federal state	0		3	0	0	0	0
Incumbency status sponsor national level	0	0.3045			0	0	1
Incumbency target national level	1	0.7175			0	1	1
Incumbency status sponsor federal state level	0		2	0	0	0	1
Incumbency target sponsor federal state level	1		2	0	0	1	2
Coalition at national level	0	0.1487			0	0	0
Coalition at federal state level	0		2	0	0	0	0
Origin	0	0.1134			0	0	0
Proporz	0		2	0	0	1	1

Data: N = 15220. Data from the *ParLEE plenary speeches* Datensatz (Sylvester, Greene, and Ebing 2022a), the *Chapel Hill Expert Survey* (Jolly et al. 2022a), the National Council Austria (Republic of Austria Parliamentary Directorate 2024a, 2024b) and state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Own computation using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning made during election campaigns at state level.

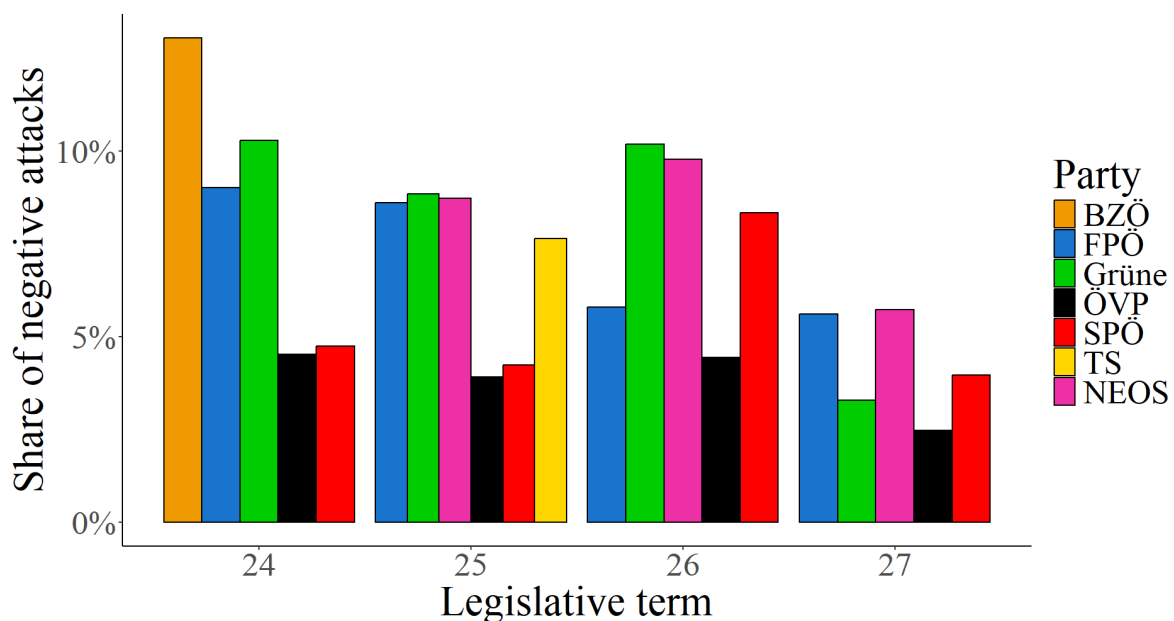
Notes: For categorical variables, the mode was calculated. For all ordinal variables, the maximum (Max), minimum (Min), 25% (p25), 50% (p50) and 75% (p75) quantiles were additionally calculated. For all dichotomous variables the mean is also calculated and can be interpreted as the proportion of values coded with one in the entire sample.

Having discussed the statistical measures, we now turn to some graphical representations of the variables of interest. Figure 4.1 shows the proportion of negative statements in all sentences by party and legislative period. There is a strong variation in this share by the grouping factors: in all legislative periods there is a clear split between opposition and government in the use of negative campaigning.⁴² In the 24th and 25th legislative periods, it is the SPÖ and ÖVP that use negative campaigning comparatively rarely, while the opposition resort to negative

⁴² The 27th legislative period is somewhat excluded from the comparison, as the government had not yet been named in this period. The comparatively low proportion of attacks can be interpreted as a pacifying effect of coalition-building processes on the use of negative campaigning.

campaigning on a regular basis. Gradations can be seen within the opposition camp: the BZÖ is the most frequent source of attacks, followed slightly behind by the NEOS, Greens (*Grüne*) and FPÖ as well as Team Stronach. A pacifying effect of incumbency and an inciting effect of being in the opposition can be observed in the 26th legislative period: while the SPÖ has significantly increased its negative statements compared to previous periods, the FPÖ has reduced them – although not to the level of its coalition partner. The comparison of the FPÖ with the SPÖ and ÖVP in government periods suggests that there are also differences in the use of negative campaigning within the government camp.

Figure 4.1: Proportion of negative attacks in speeches in the National Council by party across legislative terms



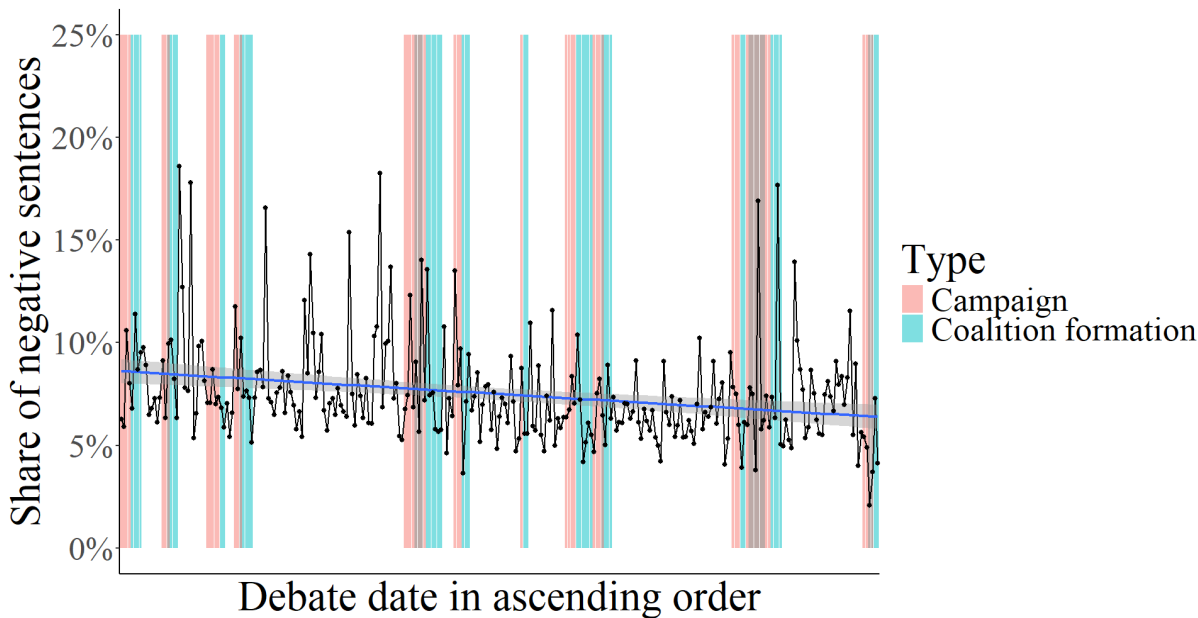
Data: N = 1368938; Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023).

Notes: The figure shows the share of attacks in the total number of statements by party across legislative terms.

To capture the temporal course of the attack behaviour in the National Council, figure 4.2 shows the proportion of attacks in all sentences by session date. The average for each session date was plotted in black. On the x-axis, the session dates of the National Council were plotted in ascending order. A regression line was plotted in blue to check for a temporal trend in negative statements. The proportion of negative statements decreases slightly over the period under investigation. To control for the role of election campaigns or government formation processes, such periods were marked in colour: meetings that took place during an election campaign (national or sub-national) are marked in red, meetings that took place during a government

formation process (national or sub-national) are marked in blue. No clear trends emerge according to these two framework conditions: neither during election campaigns nor during government formation processes does the proportion of negative statements appear to be higher or lower.

Figure 4.2: Proportion of attacks in speeches in the National Council over time



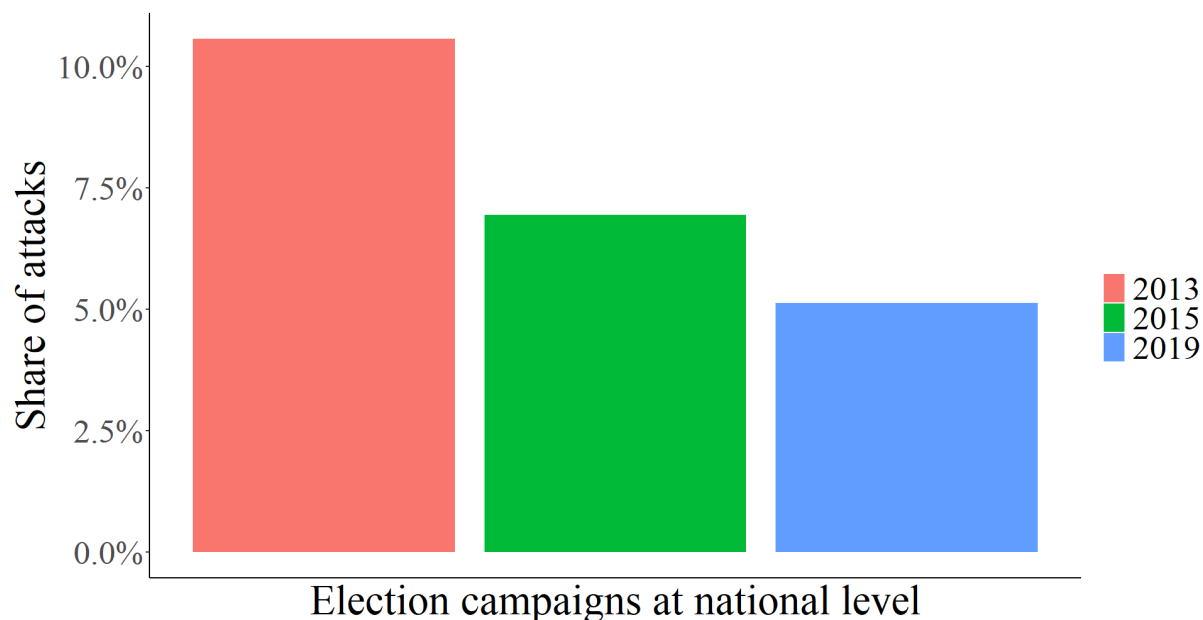
Data: N = 1368938; Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023).

Notes: The figure shows the share of attacks in the total number of statements over time. The average value is shown in black. The x axis shows the dates of the National Council’s session days in ascending order. Red and blue indicate whether an election campaign was taking place at the time of the speech (at national or state level) or whether a government formation was taking place (at national or state level).

Figures 4.3 to 4.6 provide more detailed insights into the attack behaviour of parties during election campaigns and coalition-building processes. They show separately for national and state level the proportion of sentences containing negative campaigning in the total number of sentences spoken during election campaigns or coalition-building processes. Figure 4.3 shows the proportion of negative campaigning at the times of the three election campaigns for the National Council in the period under investigation. It can be seen that there are strong differences between these proportions: while the 2019 election campaigns were comparatively moderate at around 5% and 2017 at just under 7%, every tenth sentence in the 2013 election campaign contained negative campaigning. This could be related to particularities during the election campaign or result from the different composition of the National Council. For example, as can be seen in Figure 4.1, the comparable aggressive BZÖ was only represented in the National Council during the 2013 election campaign and was unable to re-enter the National

Council afterwards. It is also conceivable that the agenda in the run-up to the elections contained a particularly large number of contentious issues, which increased the number of political attacks.

Figure 4.3: Average use of negative campaigning in the covered national election campaigns



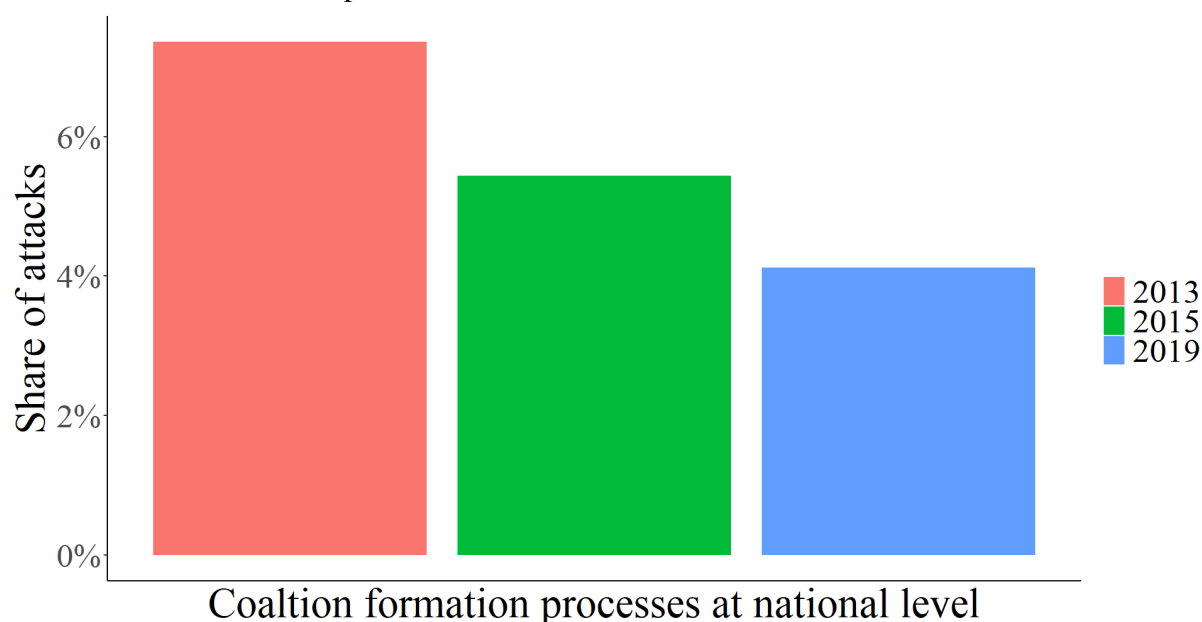
Data: N = 32131. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to sentences made in times of national election campaigns.

Notes: The figure shows the share of attacks in the total number of statements in times of election campaigns at national level.

This pattern continues in figure 4.4. It again shows the share of negative campaigning in the total number of statements made during government formation processes at national level. Compared to election campaign periods, the proportion of attacks is lower: 7.36% in 2013, 5.44% in 2017 and 4.12% in 2019. This is in line with the considerations from the theory section and the expectations that election campaign periods are characterised by more negative campaigning and government formation periods by less. Again, it is the year 2013 for which the proportion of attacks is highest. Here too, differences in the composition of the National Council could explain the observed differences. It is also possible that specific negotiating points made it more difficult to form a coalition and were also discussed in the National Council using negative campaigning. For example, the ÖVP-SPÖ coalition talks in 2013 were confronted with a considerable budget deficit and a lack of agreement on many issues. Such contextual factors are beyond the scope of this paper but offer opportunities for subsequent

research. A separate analysis of the election campaign periods would also be conceivable to identify relevant factors and compare their impact. The decreasing values over time in times of election campaigns and government formation could also indicate a latent temporal effect that lowers the level of negative campaigning independently of election campaigns or government formation.⁴³

Figure 4.4: Average use of negative campaigning in the covered national coalition formation processes



Data: N = 22380. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to sentences made in times of national coalition formation processes.

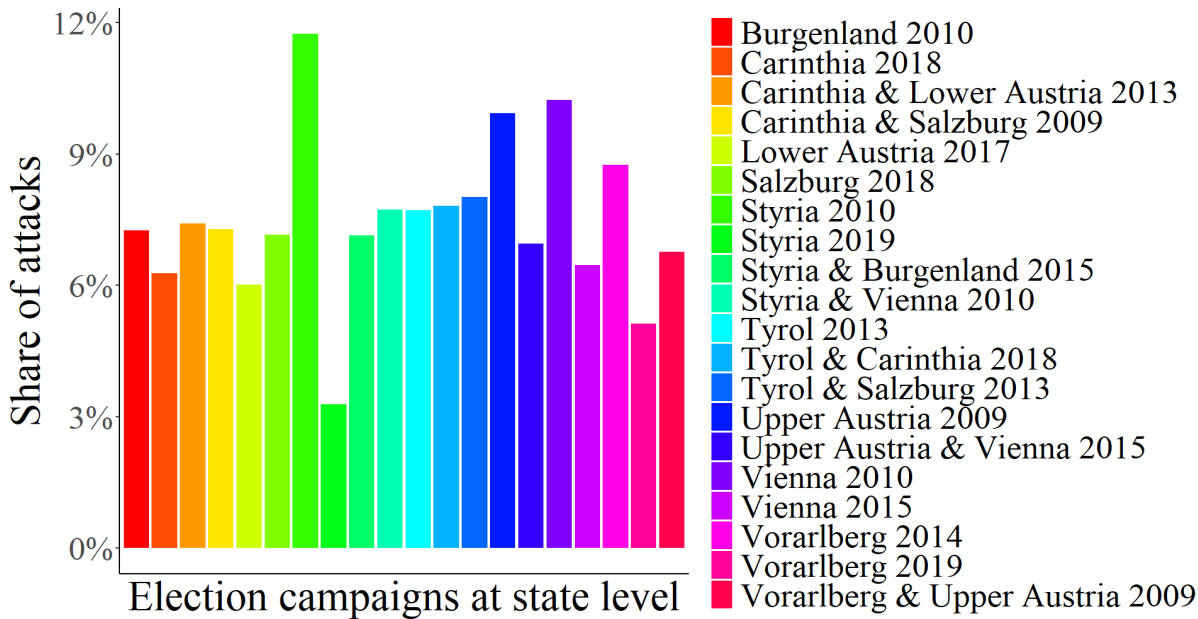
Notes: The figure shows the share of attacks in the total number of statements in times of coalition formation processes at national level.

As with the election campaigns for the National Council, differences in the use of negative campaigning can also be observed regarding the state parliament election campaigns that take place at the time of the speech. Figure 4.5 shows the proportion of attacks out of the total number of statements during the 22 state parliament election campaigns in the period under investigation. Cases in which two state election campaigns took place at the same time were listed separately. There are clear differences in the extent of negative campaigning during these periods. During the 2010 election campaign in Styria, for example, almost 12% of statements contained political attacks, while only 3.3% of statements in the 2019 election campaign in Styria contained negative campaigning. The state election campaigns in Upper Austria in 2009

⁴³ Such an effect is controlled for in the model presented later.

and Vienna in 2010 were also characterised by comparatively high levels of negative campaigning. Overall, the proportion was above the total average in the data of 7.06% in eleven cases and below it in nine cases, see figure 3.5. This descriptive presentation of the results does not reveal a pattern according to which significantly more negative campaigning is used in times of two state election campaigns. For this, please refer to the bivariate analysis in the next subchapter.

Figure 4.5: Average use of negative campaigning in the covered state election campaigns

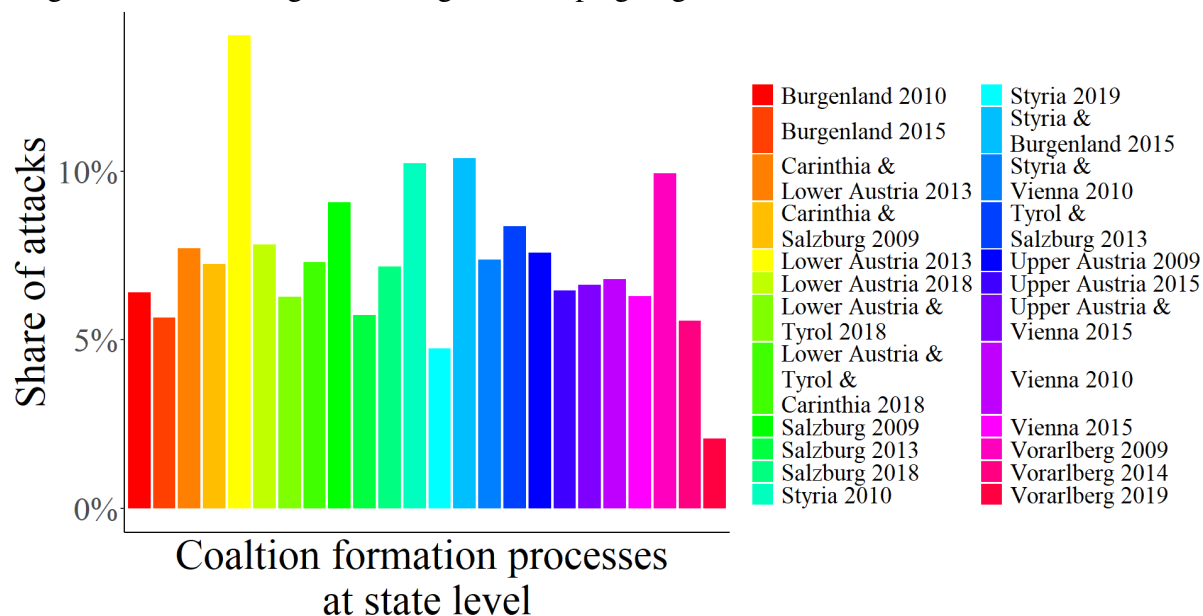


Data: N = 210003. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to sentences made in times of state election campaigns.

Notes: The figure shows the share of attacks in the total number of statements in times of election campaigns at state level.

A slight trend can be recognised that speeches during state election campaigns become milder over the years. In Styria, Upper Austria, and Vienna, for example, the proportion has fallen over the years. In contrast, they tend to remain constant for election campaigns in Carinthia, Salzburg, Tyrol, and Burgenland. Vorarlberg, on the other hand, recorded its peak in 2014. There is also no clear pattern with regard to the importance of the state in terms of population: the proportion of attacks during the 2014 election campaign in Vorarlberg was higher than during the 2015 election campaign in Vienna. An explanation for these differences cannot be found with the methods used in this thesis. A qualitative analysis of the debates and examination of the relevant contextual factors could provide insights here. These could in turn be included in subsequent quantitative analyses and thus increase the predictive power of the model.

Figure 4.6: Average use of negative campaigning in the covered state coalition formations



Data: N = 228598. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to sentences made in times of state coalition formation processes.

Notes: The figure shows the share of attacks in the total number of statements in times of coalition formation processes at state level.

Figure 4.6 shows the equivalent values in this case, however, for the periods of government formation at state level. Again, the shares have been calculated separately for cases where more than one government was formed at the same time. In total, there were 24 such periods following the 22 state elections in the period under review. For the government formation processes, the shares of negative campaigning also vary between 14% in Lower Austria in 2013 and 2.07% in Vorarlberg in 2019. The periods of government formation processes in Styria in 2010 and in Styria and Burgenland in 2015 are also characterised by high levels of negative campaigning. Overall, the periods of government formation are generally less negative than the average: the overall average share of 7.06% is only exceeded in nine of the 24 cases. Once again, no clear pattern can be recognised with regard to the number of coalitions formed at the same time: while the proportion was quite high in Styria and Burgenland 2015, it was rather low for the time of government formation in Upper Austria and Vienna in 2015. Individual small states, such as Vorarlberg in 2009, also stand out due to a high level of negative campaigning. Overall, this speaks against the expectations set out in the theory section.

Once again, no pattern can be recognised according to the importance of the federal state in terms of its population: the example of the small Vorarlberg mentioned above or the

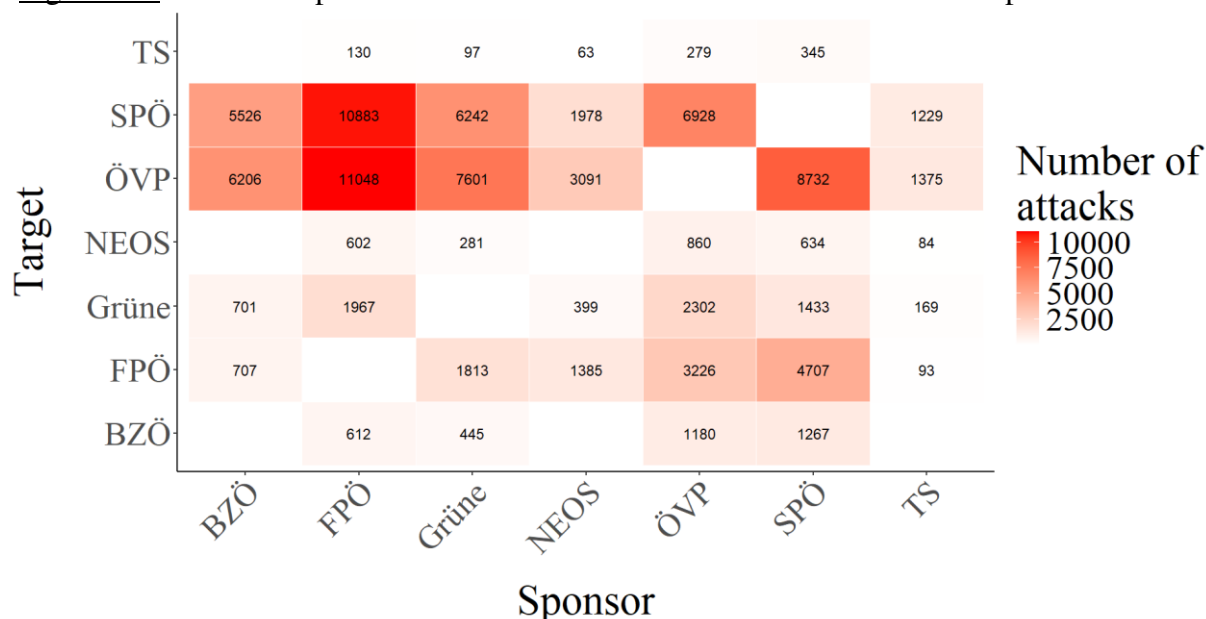
comparatively low proportion of attacks in Vienna in 2010 contradict these considerations. In some places, temporal trends can again be surmised, see the development in Salzburg, Tyrol, Vorarlberg, Burgenland, Upper or Lower Austria over time. In contrast, non-linear development over time can be found in Styria. In contrast, the shares are stagnating in Carinthia and Vienna. These differences may be explained by contextual or country-specific factors. For example, these periods could coincide only by chance with times of strong debate in the National Council, or local issues could have an additional impact on national politics and debates in the National Council. In this case, too, a qualitative analysis of the debates and examination of the relevant contextual factors could produce a gain in knowledge.

Figure 4.7 was created to provide an overview of the dyadic relationship between sponsors and targets of negative campaigning. The figure shows a heat map depicting the number of attacks by party and target.⁴⁴ The redder the field, the more this combination of sponsor and target is characterized by negative campaigning. It can be seen that the ÖVP and SPÖ are the main targets of attacks – even among themselves. These observations fit in with the theoretical considerations that governing parties are most frequently the target of attacks. The FPÖ and the Greens follow slightly behind as targets of negative campaigning. The low number of attacks on the NEOS, Team Stronach and the BZÖ is striking, but can be partly explained by the fact that they were not represented in the National Council during the entire examination period.

Furthermore, the SPÖ and ÖVP are also attacked significantly more often than they attack. This can be interpreted in terms of the frequent incumbency and the associated pacifying effect on the use of negative campaigning. It is also striking that parties target different parties: while NEOS and the Greens primarily attack the SPÖ, ÖVP and FPÖ, the FPÖ mainly targets the ÖVP, SPÖ and Greens. Team Stronach and the BZÖ are sticking to attacks on the SPÖ and ÖVP. In addition to a division by incumbency, there appear to be differences between the political camps, with the SPÖ, Greens and NEOS on one side and the other parties on the other. To further understand the use of negative campaigning, consider figure 4.8: a heat map has also been created here, but instead of showing the absolute number of attacks between the parties, it now shows their average intensity. Overall, the BZÖ, the Greens, the FPÖ and Team Stronach tend to use intensive attacks, while the other parties use slightly weaker attacks on average. This can also be seen in figure 4.9, which shows the distribution of negative campaigning by party. Attacks by Team Stronach and the BZÖ on the FPÖ seem particularly intense, while attacks between the ÖVP and SPÖ are comparatively weak.

⁴⁴ Heat maps were also created separately for the four legislative periods examined. These can be found in the appendix in figures A.2 to A.5.

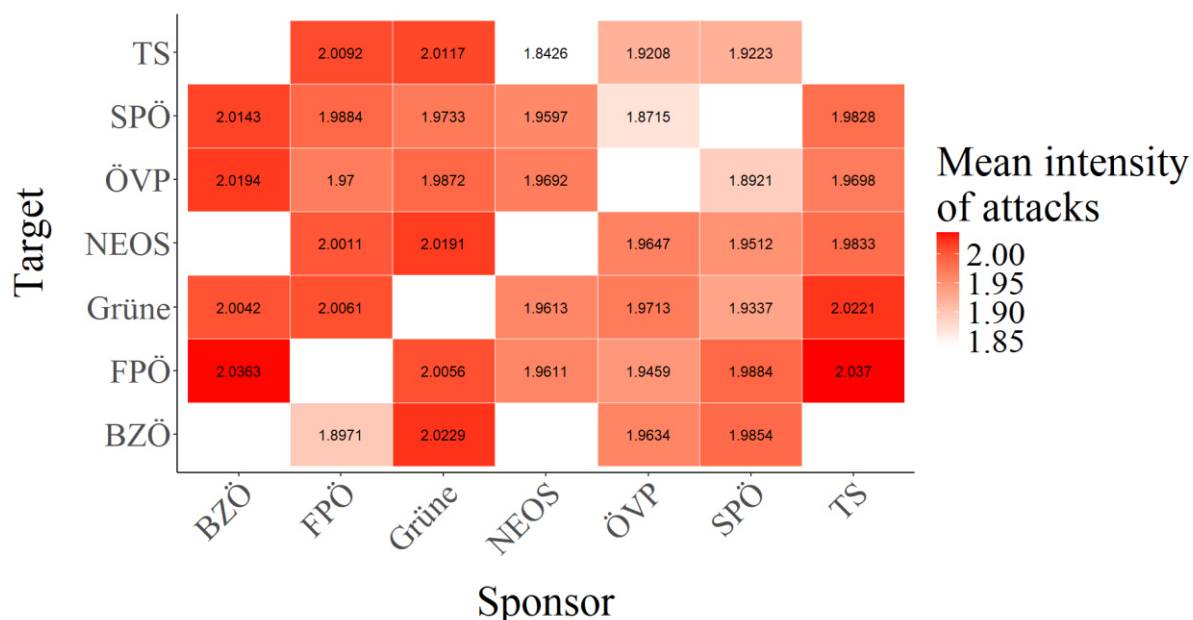
Figure 4.7: Heat map of attacks in debates of the National Council across parties



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the number of attacks by party and their target. The redder the field, the more this combination of sponsor and target is characterized by negative campaigning.

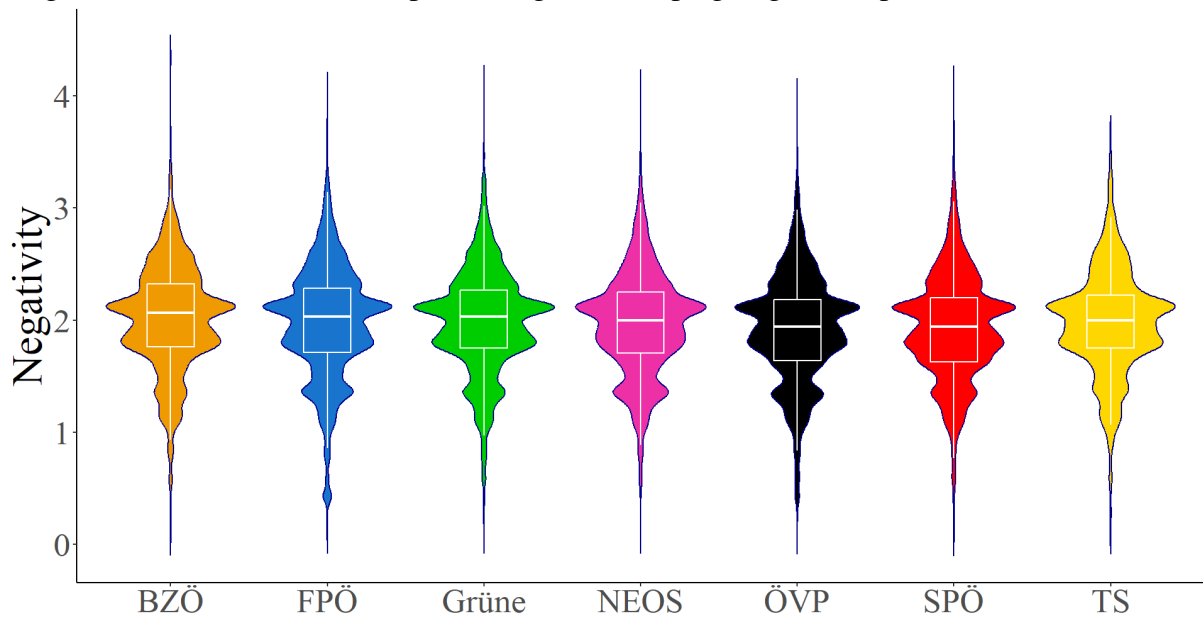
Figure 4.8: Heat map of mean intensity of attacks in the National Council across parties



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the cumulated intensity of attacks by party and their target. The redder the field, the stronger the intensity this combination of sponsor and target is characterized by.

Figure 4.9: Violin- and boxplot of negative campaigning across parties



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots separately for all parties in the data set. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

4.2 Bi- and tri-variate analysis

Before we turn to the results of the multivariate model, some bi- and tri-variate analyses are carried out in this subsection to gain further insight into the available data and to work out the relationship between the independent and dependent variables. In addition, it will be investigated whether there are strong correlations between the independent variables, as such multicollinearity can complicate the interpretation of the results and affect the stability of the regression coefficients. In addition, possible outliers and anomalies are to be identified and evaluated in this way. Finally, a deeper understanding through bivariate and tri-variate analysis can facilitate the interpretation and communication of the results of the multivariate analysis. To address the dependencies and interactions between the independent variables, the data set is reduced to attacks or attacks during state elections at an appropriate point. In this way, the effect of variables that focus on targets of attacks and/or are only relevant in the context of state election campaigns can be worked out.

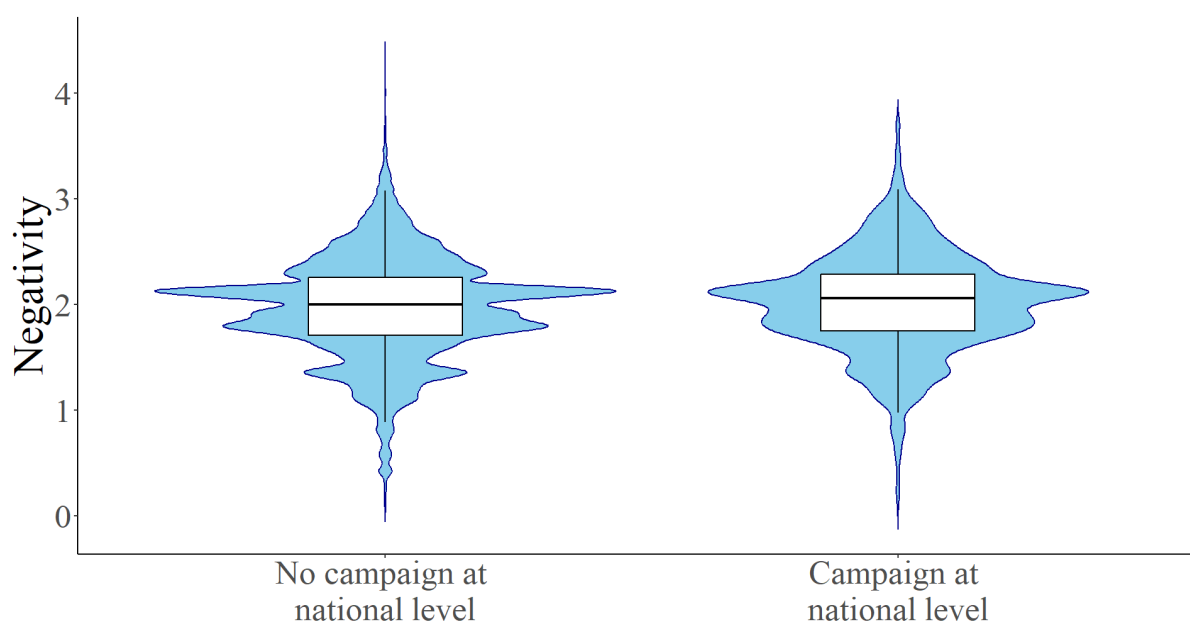
Table 4.4: Cross tabulation between attacks and campaign periods at national level

Attack status of the statement	Campaign periods at national level		
	No campaign	Campaign	Total
No attack	1242403 (90.76)	29915 (2.19)	1272318 (92.94)
Attack	94404 (6.90)	2216 (0.16)	96620 (7.06)
Total	1336807 (97.65)	32131 (2.35)	1368938 (100.00)
χ^2 Test	$X^2 = 1.2793$, $df = 1$, $p\text{-value} = 0.2580$		

Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a).

Notes: The table shows the cross tabulation of attack status of the statement and whether the statement was made during a campaign period at national level. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is computed. The result indicates that the attack status of the statement and the campaign period at national level are not dependent.

Figure 4.10: Distribution of negative campaigning during election campaigns at national level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of national election campaign and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

Table 4.4 shows the distribution of attacks in dichotomous form between election campaign periods at national level and other periods. A comparison of the cell percentages shows that the

distribution of attacks according to the manifestations of the election campaign variable at national level does not differ greatly from one another. This confirms the result of the χ^2 test. The bivariate analysis of the two variables contradicts in the first instance the assumption that there is an increased incidence of negative statements at national level during election campaign periods.

When looking at the distribution of negative campaigning in the two time periods in figure 4.10, it can be seen that the average strength of attacks during election campaigns is higher at national level than outside of election campaigns. However, the dispersion and range of these values is somewhat wider outside of election campaigns. Overall, this indicates that the attacks are more intense during election campaigns than outside of election campaigns, which fits in with the theoretical considerations from the second chapter.

Table 4.5: Cross tabulation between attacks and coalition formation periods at national level

Attack status of the statement	Coalition formation periods at national level		
	No coalition formation	Coalition formation	Total
No attack	1251167 (91.40)	21151 (1.55)	1272318 (92.94)
Attack	95391 (6.97)	1229 (0.09)	96620 (7.06)
Total	1346558 (98.37)	22380 (1.64)	1368938 (100.00)
χ^2 Test	$X^2 = 85.8699$, $df = 1$, $p\text{-value} = 0.0000$		

Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a).

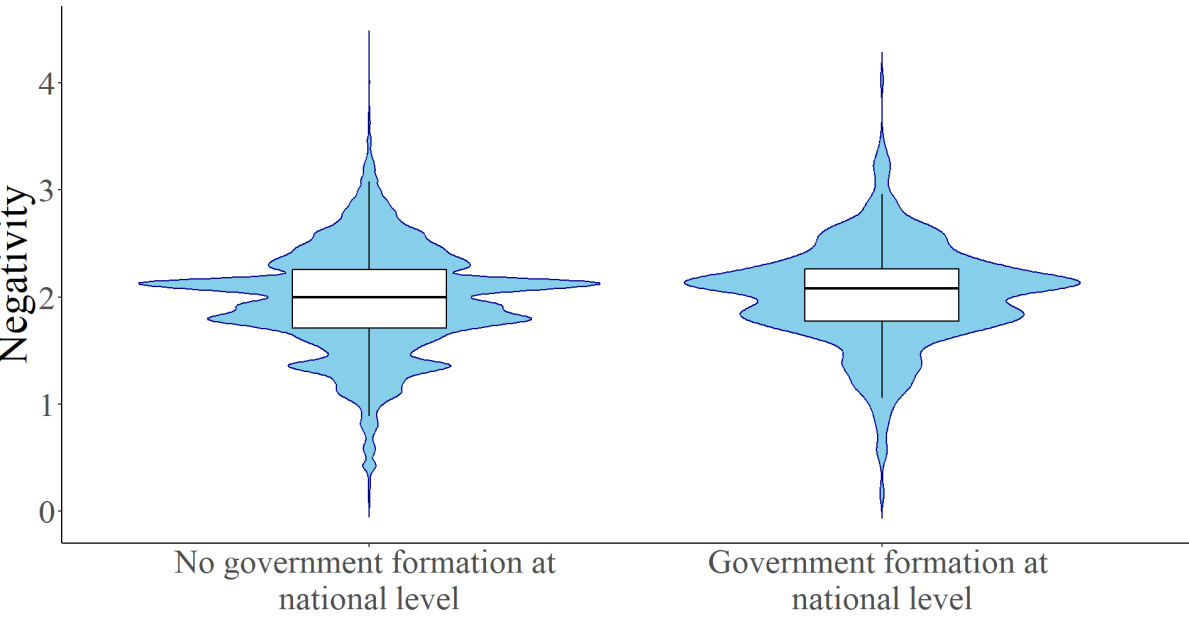
Notes: The table shows the cross tabulation of attack status of the statement and whether the statement was made during a campaign period at national level. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is computed. The result indicates that the attack status of the statement and the coalition formation period at national level are dependent.

Let us now look at the distribution of attacks during periods of government formation and at other times in the legislative period in table 4.5. Compared to other times in the legislative cycle, a disproportionately low number of attacks take place during government formation processes at national level. The χ^2 test carried out confirms the difference in the distribution of attacks between the characteristics of the independent variable. In the first instance, the bivariate analysis therefore suggests that there is a reduced incidence of negative statements at national level during periods of government formation.⁴⁵

⁴⁵ The first two bivariate analyses are illustrated in figure A.6, which can be found in the appendix. The graph shows the share of negative campaigning in the total number of statements during election

The results in figure 4.11 contradict the considerations presented in chapter 2: the distribution of the intensity of negative campaigning is shown here for the two periods examined. On average, the attacks are somewhat stronger during periods of government formation. Furthermore, the range as well as the dispersion of attack intensity is smaller during periods of government formation.⁴⁶

Figure 4.11: Distribution of negative campaigning in times of government formation processes at national level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of national government formation processes and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

campaigns at national level, national government formation processes and at other times. There is no increased proportion of negative campaigning during election campaigns at national level compared to other times. Furthermore, speakers in the National Council resort to attacks less frequently during government formation processes.

⁴⁶ The distribution of the intensity of negative campaigning according to the election-related periods at national level can be found in figure A.7 in the appendix. When looking at the average intensity of negative campaigning distributed over the election campaign, government formation and other periods, it can be seen that the average intensity of attacks is comparable for government formation periods and election campaigns, but both are higher than during the general periods. This fits in with the considerations on the use of negative campaigning in election campaign periods, but is at odds with those on government formation processes at national level.

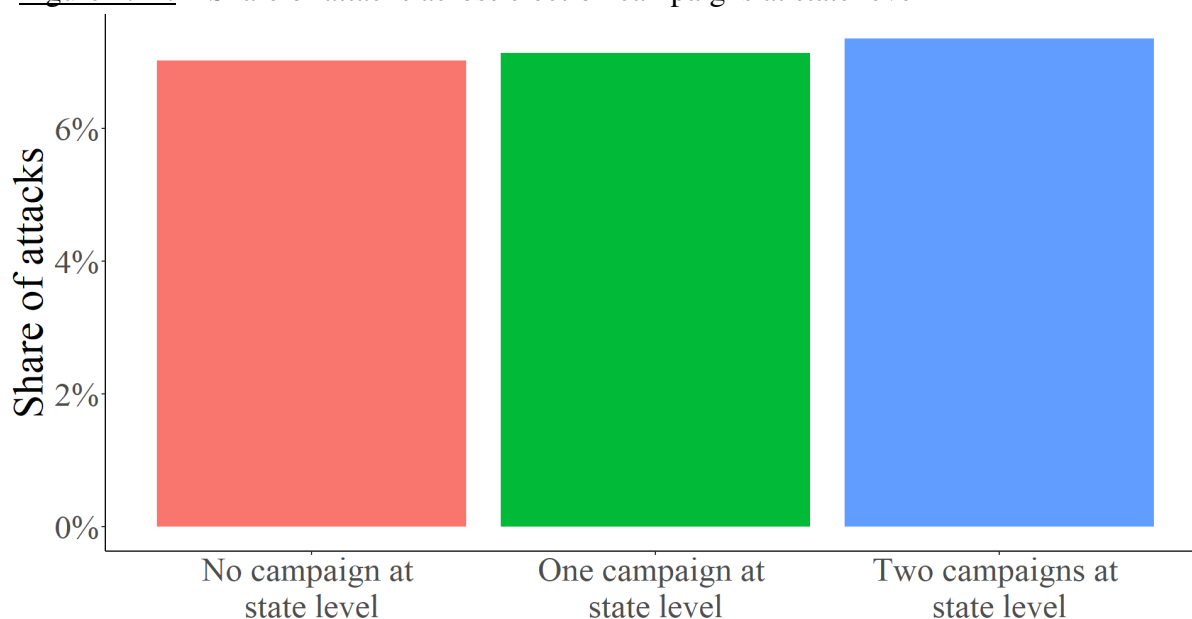
Table 4.6: Cross tabulation between attacks and campaign periods at state level

Attack status of the statement	Number of campaign periods at state level			Total
	0	1	2	
No attack	1077535 (78.71)	97469 (7.12)	97314 (7.11)	1272318 (92.94)
Attack	81400 (5.95)	7491 (0.55)	7729 (0.56)	96620 (7.06)
Total	1158935 (84.66)	104960 (7.67)	105043 (7.67)	1368938 (100.00)
χ^2 Test	$X^2 = 17.4843$, $df = 2$, $p\text{-value} = 0.0002$			

Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

Notes: The table shows the cross tabulation of attack status of the statement and whether the statement was made during a campaign period at state level. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is computed. The result indicates that the attack status of the statement and the campaign period at state level are dependent.

Figure 4.12: Share of attacks across election campaigns at state level



Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

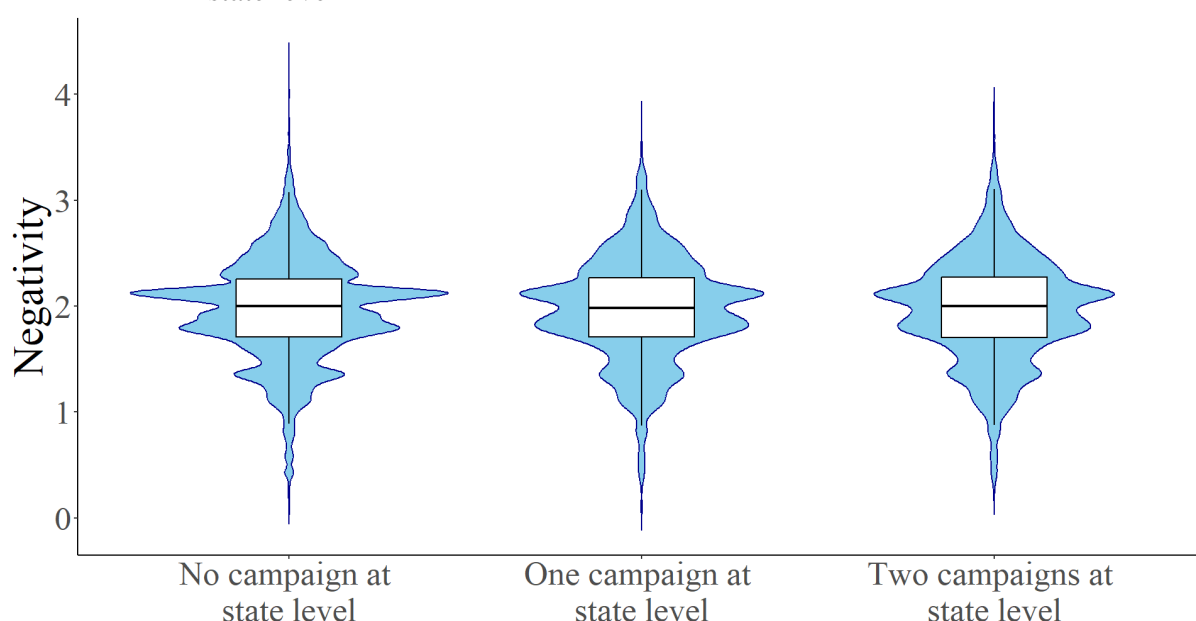
Notes: The figure shows a bar chart that reflects the proportion of negative statements in times of state election campaigns and other times.

Analogous to the distributions of negative campaigning in election campaigns and government formation at national level, the distribution of the dependent variable on election campaigns

and coalition formation processes is now considered at state level. Due to the simultaneity of election campaigns and government formation in several states, these variables were conceptualized as count variables. Table 4.6, for example, looks at the distribution of attacks according to the number of election campaign periods at state level. Here, a slight trend can be observed that the ratio of attacks to neutral statements becomes larger the more state election campaigns are conducted at the time of the speech, see also figure 4.12. The χ^2 test carried out confirms the difference in the distribution according to the level of the independent variable. In summary, this preliminary analysis confirms the existence of an increasing effect of state election campaigns on the use of negative campaigning in parliamentary speeches.

Figure 4.13 improves the understanding of the influence of state level election campaigns on the intensity of negative campaigning: here it can be seen that the distribution of intensity is consistent across the number of state election campaigns taking place at the time of the speech. According to this initial assessment, although the number of attacks appears to increase during state election campaigns, the intensity of these attacks remain constant.

Figure 4.13: Distribution of negative campaigning in times of election campaigns at state level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of state election campaign and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

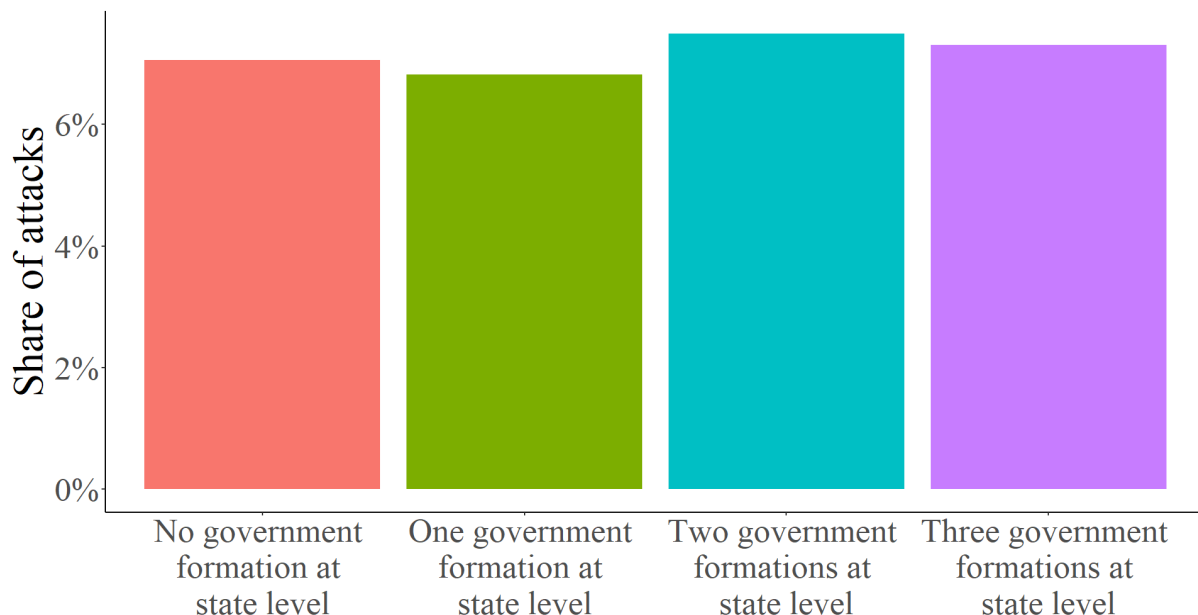
Table 4.7: Cross tabulation between attacks and coalition formation periods at state level

Attack status of the statement	Coalition formation periods at state level				Total
	0	1	2	3	
No attack	1059795 (77.42)	144249 (10.54)	59621 (4.36)	8653 (0.63)	1272318 (92.95)
Attack	80545 (5.88)	10565 (0.77)	10565 (0.35)	682 (0.05)	96620 (7.06)
Total	1140340 (83.30)	154814 (11.31)	64449 (4.71)	9335 (0.68)	1368938 (100.00)
χ^2 Test	$X^2 = 32.2461$, $df = 3$, $p\text{-value} = 0.0000$				

Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

Notes: The table shows the cross tabulation of attack status of the statement and whether the statement was made during a campaign period at state level. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is computed. The result indicates that the attack status of the statement and the coalition formation period at state level are dependent.

Figure 4.14: Share of attacks across government formation processes at state level



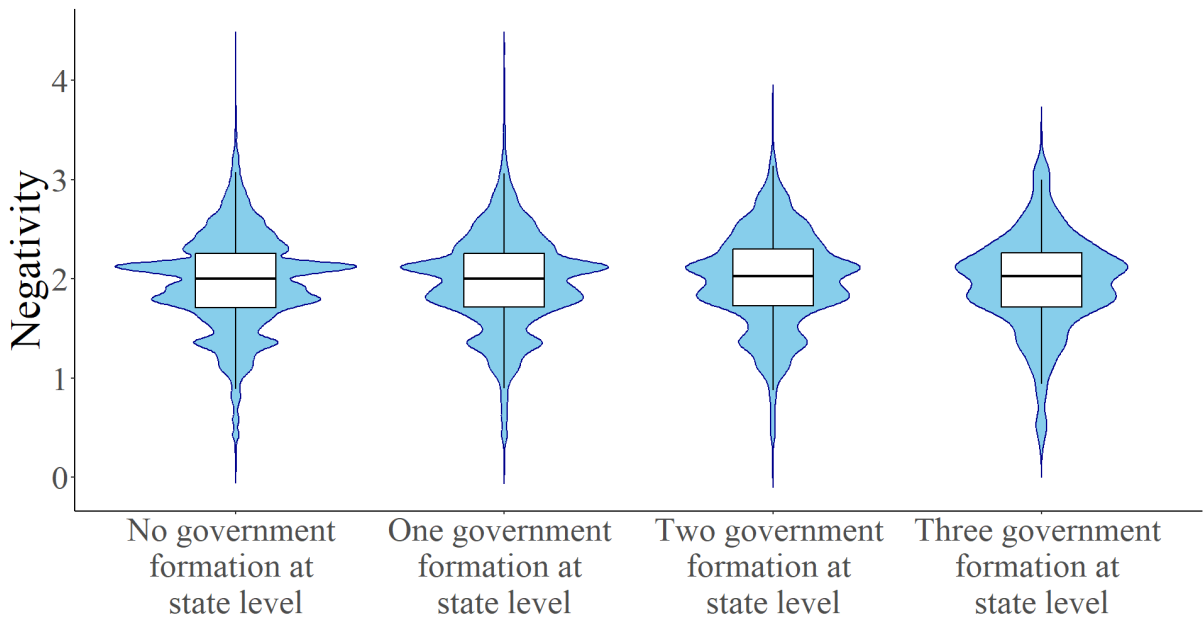
Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

Notes: The figure shows a bar chart that reflects the proportion of negative statements in times of state government formation processes and other times.

A look at the government formation processes at state level reveals a mixed picture: table 4.7 shows that although there are differences in the distribution of neutral statements and attacks – which is also confirmed by the χ^2 test carried out – the development is not consistent across the number of government formation processes. While the ratio of attacks to neutral statements is somewhat smaller for one government formation process, the proportion is higher for several simultaneous government formation processes. This is also illustrated in figure 4.14, which shows the proportion of attacks broken down by the number of government formation processes.

To understand the intensity of attacks according to the number of parallel government formation processes at state level, violin and box plots were also created for the variable, see figure 4.15. The distributions are almost identical across the characteristics of the independent variable, with negative campaigning carried out during government formation at state level even being slightly more intensive than negative campaigning carried out at other times. This contradicts the theoretical considerations made in this paper.

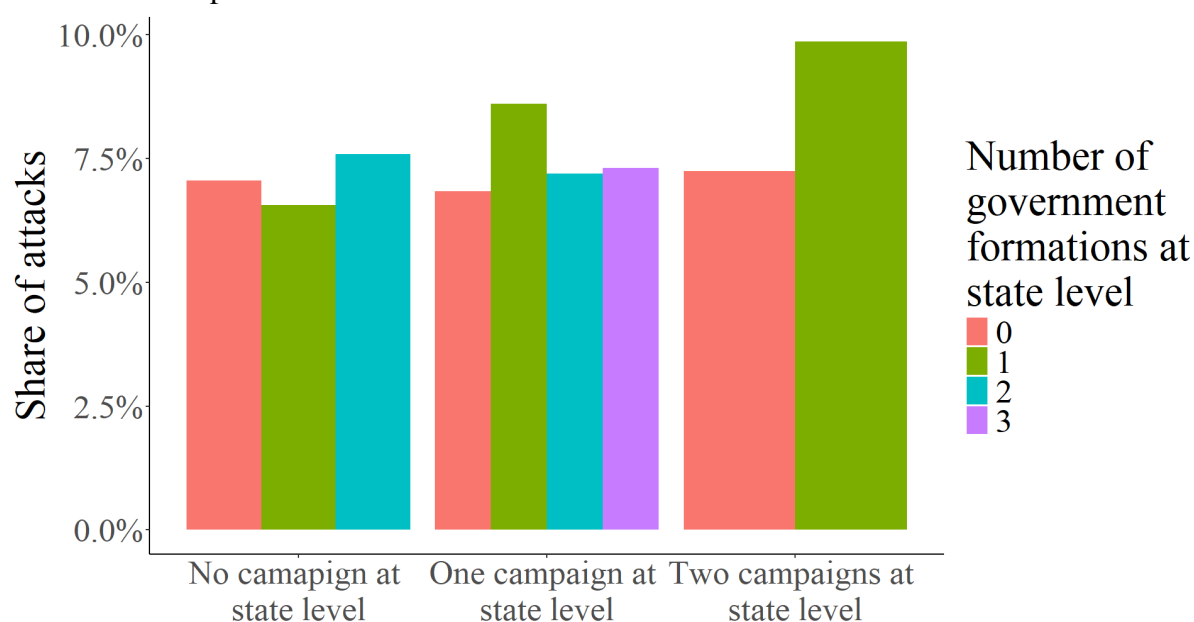
Figure 4.15: Distribution of negative campaigning in times of government formation processes at state level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of state government formation processes and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

Figure 4.16: Share of attacks across election campaigns and government formation processes at state level



Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

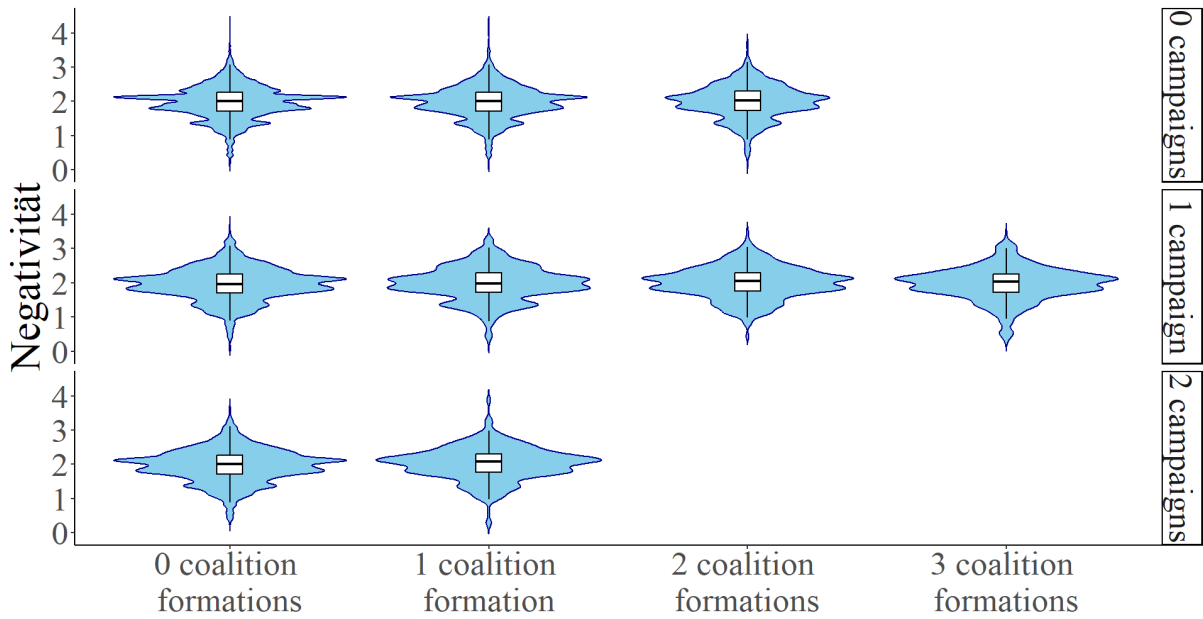
Notes: The figure shows a bar chart that reflects the proportion of negative statements in times of state election campaigns across number of simultaneous government formation processes.

Because, in contrast to the national level, government formation processes and election campaigns can take place simultaneously at the state level it is worth taking a look at the proportion of attacks across both periods. In figure 4.16, the proportion of attacks is again plotted against the number of government formation processes, grouped according to the number of state election campaigns taking place at the same time. It is noticeable that outside of election campaign periods, the proportion of attacks falls slightly for one government formation process but rises again for two such processes. If at least one election campaign takes place at the state level, the proportion of attacks seems to increase on average if at least one government formation process takes place simultaneously. These observations could indicate a slight interactive effect between the number of election campaigns and simultaneous government formation processes, which is not explained by the theory of this paper and should therefore be investigated in future research.⁴⁷

⁴⁷ Instead of government formation processes having a pacifying effect on debates in the National Council to protect office interests, such speeches can potentially also be used to strengthen one's own negotiating position and exert pressure on political opponents. It is also conceivable that internal power struggles within the parties could intensify in times of political uncertainty, such as during election campaigns or the formation of governments. MPs could be more aggressive in debates to strengthen their position

This pattern continues regarding the intensity of attacks: in figure 4.17, distribution plots were drawn according to both variables, which show that the higher the number of simultaneous government formation processes, the higher the intensity of negative campaigning, regardless of the number of simultaneous election campaigns. A pattern after rearranging the two independent variables is less clear and thus speaks against a interaction effect of the two variables.

Figure 4.17: Distribution of negative campaigning in times of election campaigns and government formation processes at state level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of state government formation processes and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

Let us now turn to the variables that provide information about the target of attacks. Note that information about the target can only be available in cases where an attack has taken place. For this reason, the cases in table 4.8 are reduced to attacks in National Council speeches. As already seen in the descriptive section, the two marginal distributions represent the proportion of attacks that originate from the government and opposition or that are aimed at the government and opposition. It can be seen that over 70% of attacks originate from opposition parties and just under 74% of attacks target the governing parties. The cells within the table now show the

within the party. The possible interaction effect could then result from the fact that the factors mentioned reinforce each other.

combination of attacks between the government status of the attacker and the target of the attack. When comparing the cell values, it is noticeable that while governing parties divide their attacks roughly equally between governing and opposition parties – with a slight preponderance in favour of opposition parties – opposition parties concentrate their attacks primarily on the government. The results of the χ^2 test confirmed this descriptive analysis: the distribution of attacks in combinations of government and opposition as target and sponsor of negative campaigning is not equally distributed, but dependent. This indicates an interaction effect between the two variables with regard to attacks in the National Council, as argued in the theoretical part of this paper.

Table 4.8: Cross tabulation of national incumbency status of target and sponsor at national level

National incumbency status sponsor	National incumbency status target		Total
	Opposition	Government	
Opposition	10424 (10.79)	57371 (59.38)	67795 (70.16)
Government	14821 (15.34)	14004 (14.49)	28904 (29.83)
Total	25245 (26.13)	71375 (73.87)	96620 (100.00)
χ^2 Test	$X^2 = 13610$, $df = 1$, $p\text{-value} = 0.0000$		

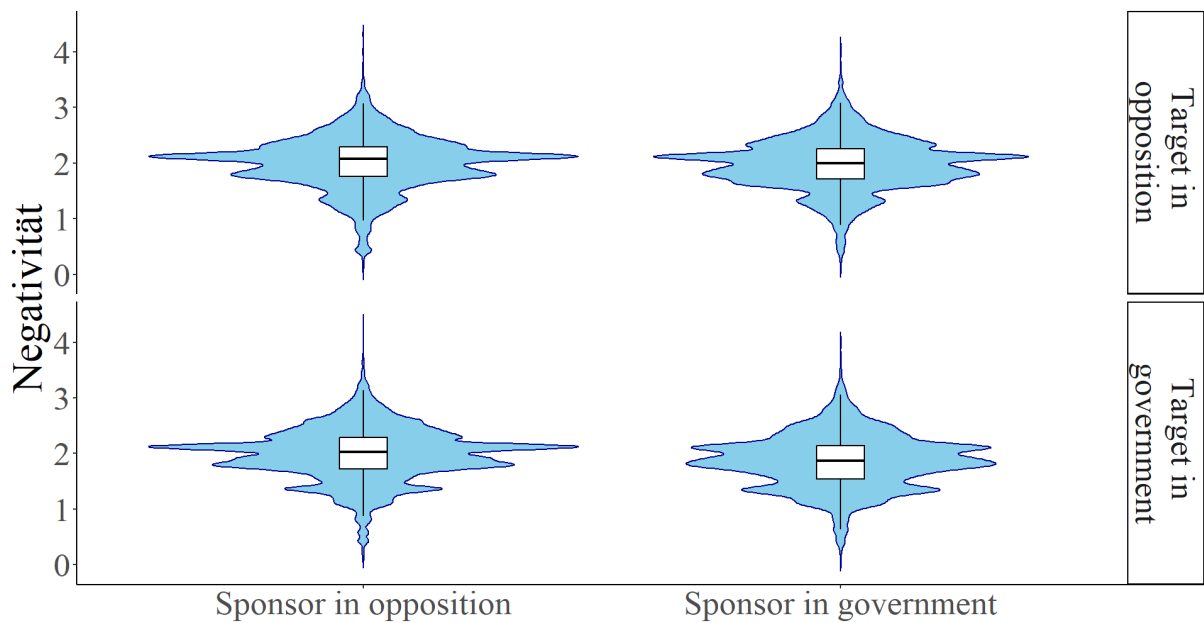
Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to acts of negative campaigning.

Notes: The table shows the cross tabulation of national incumbency status at national level of the sponsor and the target of the attacks. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is additionally computed. The result indicates that the national incumbency status of the target and the sponsor of an attack are dependent.

When looking at the intensity of attacks that actually took place, a different picture emerges: as shown in figure 4.18, opposition parties attack other opposition parties with the strongest negativity in comparison (mean 2.00; median 2.08). In contrast, opposition attacks against the government, although more frequent in number, are weaker in strength (mean 1.98; median 2.03). This observation continues for attacks originating from governing parties. In these cases again, attacks against the opposition (mean 1.98; median 2.00) are stronger than attacks against other governing parties (mean 1.86; median 1.87). In summary, it can be seen that attacks originating from the opposition are on average more negative than attacks by governing parties, which primarily confirms the theoretical expectations. On the other hand, the fact that attacks by the opposition against the government are on average weaker than those against the opposition speaks against the considerations presented. However, the preliminary analyses

point to an interaction effect between the incumbency of the sponsor and the target of an attack. While only a small difference in the strength of attacks against the opposition can be observed depending on the sponsor's incumbency status, attacks against governing parties are significantly weaker when a governing party attacks. The multivariate analysis will show whether such an interaction effect is persistent, taking into account relevant framework conditions.

Figure 4.18: Distribution of negative campaigning across incumbency status of target and sponsor of attacks at national level



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots across the incumbency status of the target and the sponsor of an attack at national level. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

As at national level, the distribution of acts of negative campaigning between opposition and governing parties is analysed at state level. Since the theoretical argument is that this effect is only to be expected in times of election campaigns at the state level, the number of cases considered was reduced to attacks during state elections. Since incumbency was operationalised as a count variable, which is the number of states in which an election campaign takes places and the speaker's party is part of the government, combinations of three times three manifestations are compared. Instead of a χ^2 test, the ordinal structure of the data is considered and a Spearman's rank correlation coefficient test is performed. The results of the test indicate that the two variables correlate only weakly and are not significantly dependent on each other.

The preliminary analysis therefore suggests that there is no interaction effect between the incumbency of the target and the attacker at the state level.

Table 4.9: Cross tabulation of national incumbency status of target and sponsor at state level

States in election campaign with sponsor part of government	States in election campaign with target part of government			Total
	0	1	2	
0	1756 (11.54)	4105 (26.97)	2815 (18.50)	8676 (57.00)
1	1455 (9.56)	1388 (9.12)	1150 (7.56)	3993 (26.24)
2	680 (4.47)	528 (3.47)	1343 (8.82)	2551 (16.76)
Total	3891 (25.57)	6021 (39.56)	5308 (34.88)	96620 (100.00)
χ^2 Test	S = 585200000000, $\rho = 0.0041$, p-value = 0.6116			

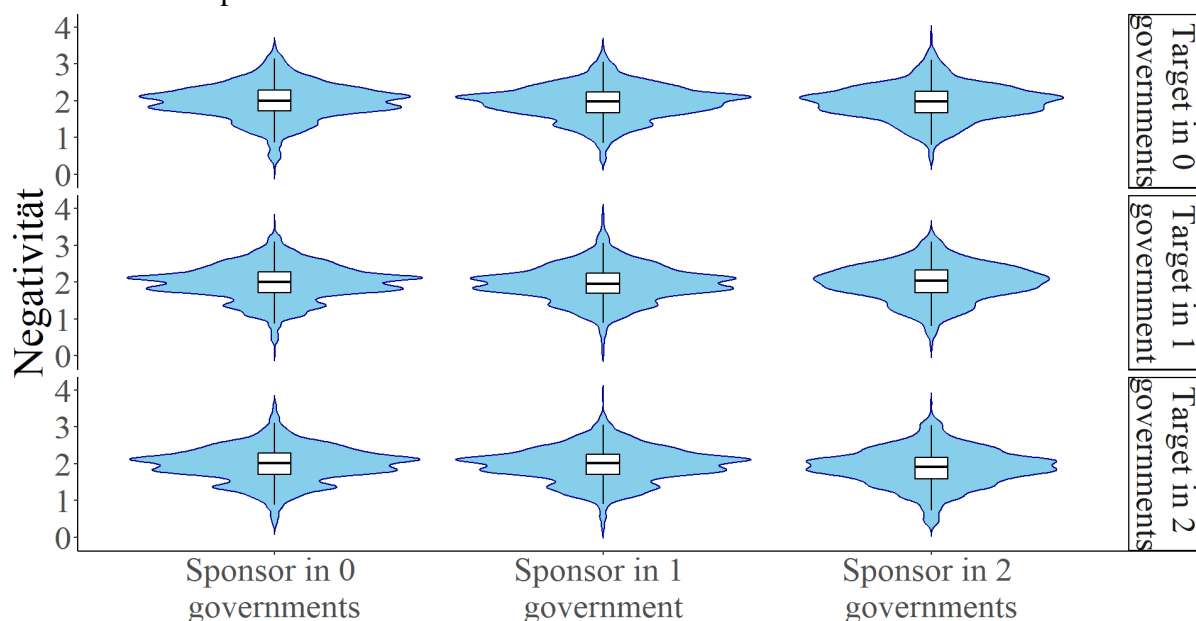
Data: N = 15220. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to attacks during an election campaign at state level.

Notes: The table shows the cross tabulation of national incumbency status at state level of the sponsor and the target of the attacks. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A Spearman's rank correlation ρ with significance test for the variables shown is additionally computed. The result indicates that the two variables are positively but insignificantly correlated.

These signs also continue with regard to the intensity of the attacks: as figure 4.19 shows, no pattern can be recognised for any expression of the target variable in terms of an increase or decrease in intensity when the variable that counts government participation at state level increases. Such a pattern is also not recognisable for the opposite combination. It follows that there is also no discernible interaction effect between the government participation of the sponsor and the target of an attack regarding the intensity of the attacks.

In the theoretical part, it was argued that the role of the states in the use of negative campaigning in National Council debates is reflected via another variable: the origin of the MPs. It was argued that MPs nominated by a state party for the National Council use more negative campaigning when an election campaign takes place in the state of their state party. Table 4.10 contains the absolute values of the attacks and positive statements for the two characteristics of the origin variable. As this variable only has an effect during state election campaigns, the amount of data analysed was reduced to speeches during state election campaigns. It can be seen that the distribution between neutral statements and attacks does not differ greatly according to the origin variable. The χ^2 test carried out confirms this observation.

Figure 4.19: Distribution of negative campaigning across incumbency status of target and sponsor of attacks at state level



Data: N = 15220. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to attacks during an election campaign at state level.

Notes: The figure shows violin and box plots for incumbency status of the target and the sponsor of an attack at state level. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

Table 4.10: Cross tabulation of attack status of statements during state election campaigns and origin of the speaker

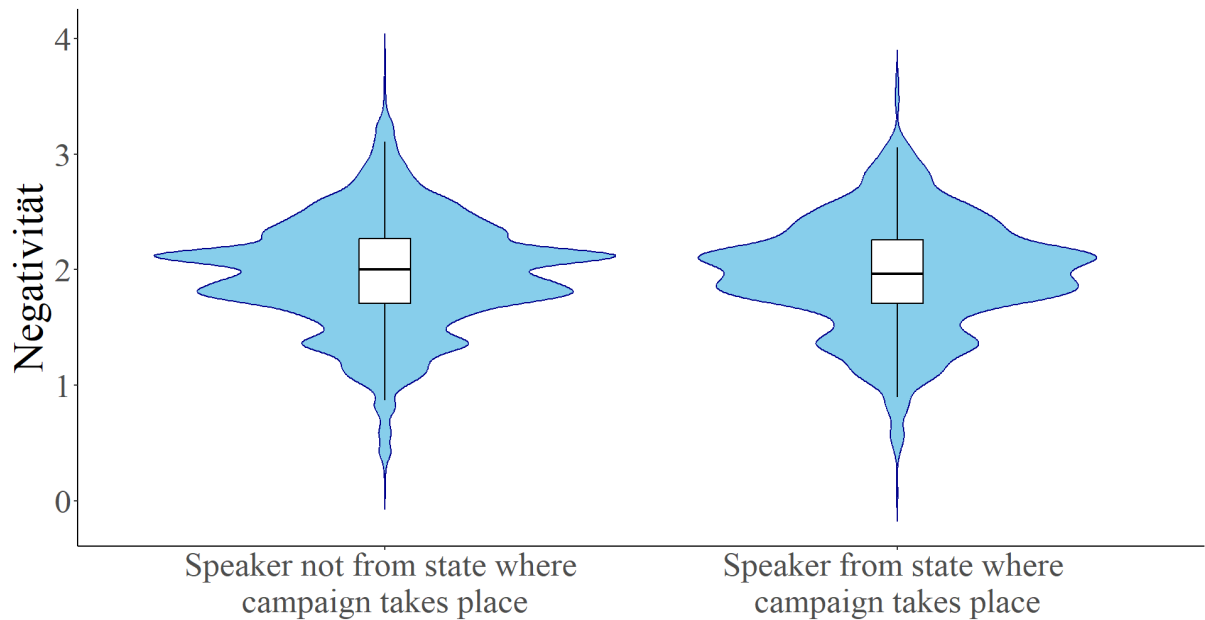
Attack status of the statement	Origin of the speaker		Total
	Not from state where election takes place	From state where election takes place	
No attack	172644 (82.21)	22139 (10.54)	194783 (92.75)
Attack	13494 (6.43)	1726 (0.82)	15220 (7.25)
Total	186138 (88.64)	23865 (11.36)	210003 (100.00)
χ^2 Test	$X^2 = 0.0068$, $df = 1$, $p\text{-value} = 0.9341$		

Data: N = 15220. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a) and the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to statements during election campaigns at state level.

Notes: The table shows the cross tabulation of national incumbency status at national level of the sponsor and the target of the attacks. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. The result of the computed χ^2 test indicates that the origin of the speaker and his willingness to attack during election campaigns at state level are independent.

The influence of the origin variable should also be analysed with regard to the strength of the attacks. Consequently, a distribution plot was created for this variable, which shows the distribution of negative campaigning according to the two characteristics of origin. Note that the data basis for this is all attacks made during election campaigns at state level in the National Council. In figure 4.19, it shows that the mean intensity values between the two groups differ only minimally: people who were nominated from the state in which an election campaign takes place make slightly weaker attacks. This suggests that there is no significant effect from the origin of the MPs and therefore contradicts the theoretical considerations.

Figure 4.20: Distribution of negative campaigning during periods of election campaign at state level across origin of the speaker



Data: N = 15220. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a) and the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to attacks during election campaigns at national level.

Notes: The figure shows violin and box plots for attacks during election campaigns at state level across the origin of MPs. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

Finally, let us turn to the last independent variable: the mode of government composition at the state level. In the second chapter, it was argued that election campaigns in states with *Proporz* system are characterised by less negative campaigning. Consequently, there should be more attacks in the National Council during state parliamentary election campaigns in states that form their government according to the majority principle. Table 4.11 shows the share of attacks in the total number of statements during state parliament election campaigns. As the variable

Proporz is an interaction effect that only appears when state parliamentary election campaigns take place, the number of cases analysed was reduced to statements made during state parliamentary election campaigns. The simultaneity of election campaigns at the state level results in three values for the *Proporz* variable, from 0 – in none of the states in which an election campaign is taking place at the time of the speech is the government formed according to the *Proporz* system representation – to 2 – in two of the states in which an election campaign is taking place at the time of the speech, the government is formed according to *Proporz* principle. The cell values, as well as the χ^2 test carried out, suggest that there is a correlation between the proportion of attacks during state election campaigns and the mode of composition of the respective state government.

Table 4.11: Cross tabulation of attack status of statements during state election campaigns and mode of government formation

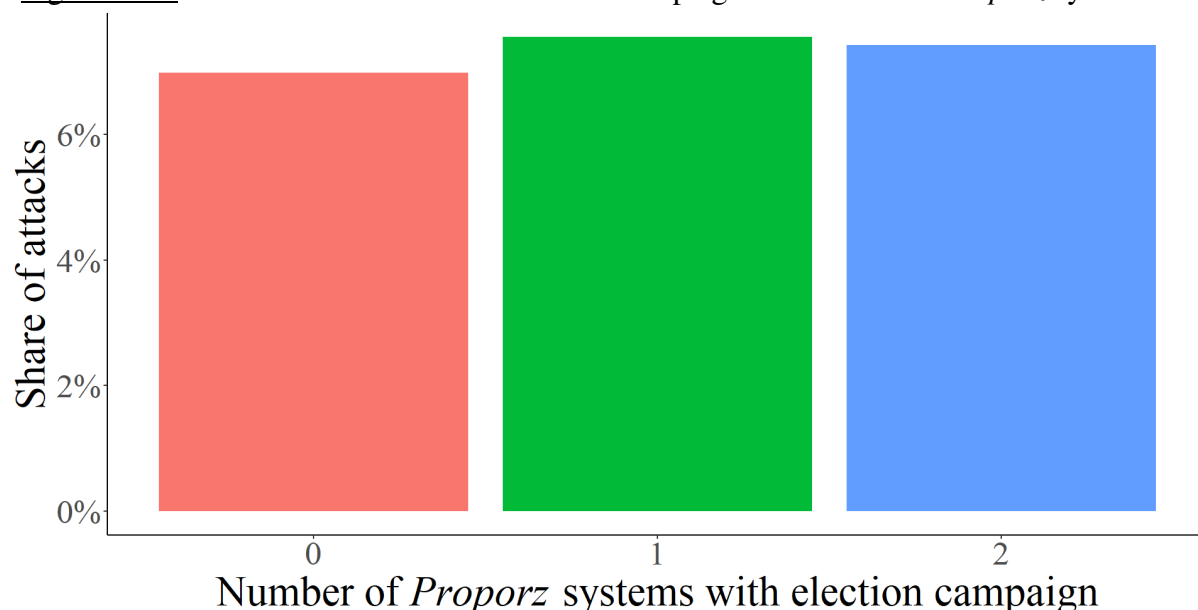
Attack status of the statement	Mode of government formation in states where an election takes place			Total
	No Proporz	One Proporz system	Two Proporz systems	
No attack	99752 (47.50)	77073 (36.70)	17958 (8.55)	194783 (92.75)
Attack	7486 (3.56)	6296 (3.00)	1438 (0.68)	15220 (7.25)
Total	107238 (51.06)	83369 (39.70)	19396 (9.24)	210003 (100.00)
χ^2 Test	$X^2 = 23.6482$, $df = 1$, $p\text{-value} = 0.0000$			

Data: N = 210003. Own calculation based on data from the *ParlEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a) and the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to statements during election campaigns at national level.

Notes: The table shows the cross tabulation of national incumbency status at national level of the sponsor and the target of the attacks. Each cell contains the absolute number of attacks with the respective characteristics. The cell percentages are in brackets. The marginal distributions are given in the same way. A χ^2 test for the variables shown is additionally computed. The results of the test suggest that the mode of government composition and the decision to go negative during a state election campaign are interdependent.

Contrary to theoretical assumptions, however, this correlation does not appear to point in the expected direction, nor does it appear to be linear, as figure 4.20 shows: on the one hand, there appear to be more attacks on average during election campaigns conducted in states with a *Proporz* system than in the other states. It is also noticeable that this proportion is lower for two systems with a *Proporz* system than when election campaigns are conducted in only one state with a *Proporz* system. The two-part model will show whether this correlation also exists if the control variables are considered.

Figure 4.21: Share of attacks across election campaigns in states with *Proporz* system

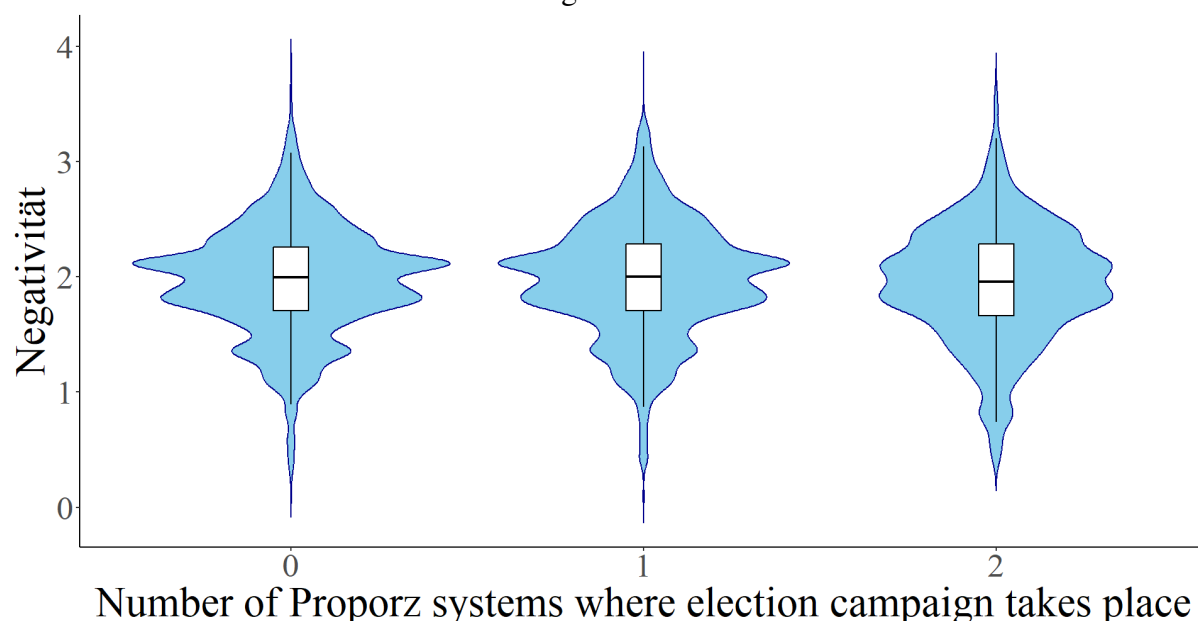


Data: N = 210003. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a) and the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to statements during election campaigns at national level.

Notes: The figure shows a bar chart that reflects the proportion of negative statements in times of state election campaigns at state level across their mode of government formation.

Finally, a preliminary analysis of the relationship between the mode of government formation and the intensity of attacks conducted during state election campaigns will be carried out. The results in figure 4.21 are mixed with regard to the expected effect: while there are no differences between election campaigns in states without a *Proporz* system and the case where the government is formed according to the *Proporz* principle in one of these states, this is not the case in the third case. If two of the states in which an election campaign takes place form their government according to *Proporz* principle, the attacks are slightly weaker on average than for the other forms of the *Proporz* variable. Here too, only an analysis of the multivariate model can finally confirm or reject the theoretical considerations.

Figure 4.22: Distribution of negative campaigning during periods of election campaign at state level across modes of government formation



Data: N = 15220. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a) and the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024). Cases reduced to attacks during election campaigns at national level.

Notes: The figure shows violin and box plots for attacks during election campaigns at state level across modes of government formation. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

4.3 Results of the two-part model

As mentioned in section 3.3, the hypotheses derived in the theoretical part are tested using a multivariate two-part model. The results of this model can be found in Table 4.12. On the left-hand side are the estimated coefficients for the first part of the model, the logit model (LM). All sentences contained in the data set (N = 1368938) were used as the data basis here in order to analyse how the independent variables affect the decision to go negative. All variables that contain information about the target of an attack cannot be included in the model, as no attack has yet taken place. The second column contains the results of the second part of the model, the generalised linear model (GLM). This model is used to control the effect of the independent variables on the intensity of the occurred attacks. Consequently, the analysed sentences are reduced to cases of negative campaigning (N = 96620). In the LM, the variables EU, retaliation, size of the speaker's party, gender of the speaker, date, party of the speaker, policy area spoken about and population size of the states where an election campaign takes place were controlled for. In the GLM, in addition, both measurements of the ideological distance between the sponsor

and the target of the attack were controlled for. These control variables are not shown in the table as they cannot be interpreted without a sufficient theoretical foundation (Hünernmund and Louw 2023).^{48 49}

In the first part of the model, the independent variable is a dichotomous version of the dependent variable negativity, which indicates whether a sentence is an act of negative campaigning without making statements about the intensity of an attack. To interpret the results of the LM, the coefficients are transformed using the formula $(e^{\beta} - 1) \times 100$ to obtain the approximate percentage by which the dependent variable changes when the independent variable increases by one unit (Hosmer, Lemeshow, and Sturdivant 2013, 52). Thus, the estimated effects can be interpreted in terms of changing the probability of negative campaigning.

Contrary to theoretical considerations, the probability of negative campaigning is lower in times of election campaigns at national level than at other times. The estimated coefficient indicates that, holding all other variables constant, the probability is 16.76% smaller. In line with the considerations on the importance of coalition formation processes at the national level, attacks are also less likely (-34.71%) if the speech is held between a National Council election and the formation of the new government. Election campaigns and government formation processes at the state level both show an unexpected effect: while the probability for a speaker to become negative decreases (-6.11%) for each state election campaign that took place during the speech, it increases (+7.19%) for each government that is formed at the state level at the time of the speech. Regarding the effects of incumbency, the effects point in the assumed direction: holding the other variables in the model constant, the probability of negative campaigning decreases by 73.10% if the speaker belongs to a national governing party.

⁴⁸ In order to control for the significance of the hierarchical structure of the data, a logit model was calculated separately for the first part and a GLM for the second part, both clustered by party and speaker. The results can be found in table A.3 in the appendix. It can be seen that both models represent an improvement on the two parts. The majority of the estimated coefficients point in the same direction as in the two-part model, albeit with different effect sizes. Since, as already explained in the methodology section, there is currently no way to take the hierarchical structure into account in two-part models, the model presented is the best available. However, the results can only be generalised with reservations.

⁴⁹ An additional control model was calculated with regard to the considerations on the operationalisation of the sub-national variables election campaign, government formation process as well as incumbency of target and sponsor, which was solved using count variables. Instead of a count, binary variables were used in the additional model, which take the value one if an election campaign/government formation process was taking place at sub-national level at the time of the speech or if the target/sponsor is part of the government in a state in which an election campaign is taking place. Analogue to the procedure with the original variables, a two-part model was calculated. The results of this model can be found in the appendix in table A.4: there are hardly any noticeable differences in terms of effect size and direction. This could indicate a low significance of the actual number of states in which the election campaign/government formation takes place. However, the original model is better fitted to the data, as the calculated AICs show, and is therefore interpreted here.

Table 4.12: Results of the two-part model

Variables	First part: <i>Logit model</i>	Second part: <i>GLM</i>
Campaign National Council (1 = speech during national election campaign)	-0.1835 (0.0267)***	0.0490 (0.0106)***
Government formation National Council (1 = speech during national government formation)	-0.4263 (0.0325)***	0.0222 (0.0150)
Campaign federal state (number of state election campaigns during speech)	-0.0630 (0.0169)***	-0.0276 (0.0103)**
Government formation federal state (number of state government formations during speech)	0.07185 (0.0073)***	0.0090 (0.0028)**
Incumbency status sponsor national level (1 = speaker part of national governing party)	-1.3129 (0.0187)***	0.0136 (0.0083)
Incumbency status target national level (1 = target part of national governing party)		-0.0380 (0.0075)***
Incumbency status sponsor federal state level (number of states where campaign takes place and speaker belongs to a governing party)	-0.0357 (0.0170)*	0.0083 (0.0113)
Incumbency status target federal state level (number of states where campaign takes place and target belongs to a governing party)		0.0046 (0.0094)
Coalition at national level (1 = target and sponsor part of national governing party)		-0.1071 (0.0081)***
Coalition at federal state level (number of states where campaign takes place and target & sponsor belong to governing coalition)		0.0012 (0.0134)
Origin (1 = campaign in the state where speaker is from)	0.0206 (0.0340)	-0.0213 (0.0129)
<i>Proporz</i> (number of states where campaign takes place and government is formed by <i>Proporz</i>)	0.1385 (0.01764)***	-0.0120 (0.0067)
Intercept	-4.5658 (0.0721) ***	1.9784 (0.0272)***
Akaike information criterion (AIC)	459458	131920
Null deviance	698534	22467
Residual deviance	459376	22137
N	1368938	96620

Data: Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), *Statistik Austria* (2023) and the *Chapel Hill Expert Survey* (Jolly et al. 2022a).

Notes: Logistic regression parameters (Logit model) and linear regression parameters (GLM) are given with robust standard errors in brackets. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. For all models, negativity is the dependent variable. Reported coefficients and statistical measures are rounded to four decimal places. In the logit model, the variables EU, retaliation, size of the speaker's party, gender of the speaker, date, party of the speaker, policy area spoken about and population size of the states in which an election takes place were controlled for. In the GLM, the ideological distance between the sponsor and the target of the attack was additionally controlled for.

The same applies to incumbency at federal level, although the effect is less pronounced here. For each state government of states where an election campaign is taking place at the time of the speech and where the speaker is a member of the party, the probability of going negative decreases by 3.51%. No significant effect can be observed regarding the state party affiliation of the spokesperson. This had already been indicated by the previous analysis, where no significant differences in attack behaviour were found between MPs who are part of a state party organisation in a state where an election campaign is taking place and all other MPs.⁵⁰ With regard to the considerations on the mode of government composition in states where an election campaign takes place during the speech, surprising effects also emerge. Instead of a pacifying effect, the variable *Proporz* appears to have a fuelling effect.⁵¹

Let us now turn to the interpretation of the second part of the model, the GLM. Recall that the identity of the Gaussian family was used here as the link function and therefore the coefficients can be interpreted as in an ordinary linear regression. Note that in the second part of the model, only attacks that took place (N = 96620) are analysed. The dependent variable here is negativity, which contains information about the intensity of an attack. Since only acts of negative campaigning in the National Council are analysed, all independent variables presented in the theoretical part can be included in the model – including those that contain information about the target of an attack.

Firstly, it can be seen that attacks carried out during a national election campaign are more intense than attacks carried out at other times during the legislative periods. With regard to the distribution of the dependent variable (mean = 1.97; max = 4.38; min = 0.06), the effect is comparatively small with a value of 0.05 – albeit significant. In contrast, periods of coalition formation have no significant effect on the strength of the attacks. At the state level, the unexpected effects of election campaigns and government formation, which were already observed in the first part of the model, continue. Each additional state election campaign that takes place during the speech lowers the intensity of attacks by 0.03 units, while each additional government formation process increases the intensity of attacks by 0.01 units. Again, the effect sizes are comparatively small, but significant.

When interpreting the effect of incumbency, it should be noted that the inclusion of the coalition variable means that these are interaction effects. The effect of the incumbency of the sponsor of an attack can be interpreted as the target of the attack being an opposition party. However, the effect is not significant. With regard to the incumbency status of the target, the effect can be

⁵⁰ See table 4.10.

⁵¹ This was already evident in the preliminary analysis of this variable, see figure 4.20, for example.

understood as the sponsor of the attack being part of the opposition at the national level. When an opposition party attacks the government, the mean negativity of an attack is 0.038 lower than when it attacks another opposition party, all other things being equal. If the sponsor and target of an attack are both part of the national coalition government, the intensity of such an attack tends to be weakened: all other things being equal, such attacks are 0.1071 units weaker – a strong effect compared to the other coefficients. At the state level, the incumbency of the target and sponsor of negative campaigning in the National Council does not appear to be of relevance. All reported coefficients are not significant. The same applies to the number of states where there is an election campaign and where the target and sponsor of an attack are part of the government. There are also no significant effects on the intensity of acts of negative campaigning for the variable *Proporz* and the variable origin.

Let us now turn to the hypotheses formulated in the second chapter. These will be evaluated regarding both components of the two-part model. With regard to the role of election campaign periods at the national level, the results are mixed: attacks are less likely in times of election campaigns at the federal level, but the attacks carried out tend to be more intense. The first hypothesis, according to which MPs attack more frequently shortly before national elections, can therefore not be accepted. The results could be explained by the fact that the debate about policies decreases towards the end of the legislative period, as fewer laws are discussed (cf. Berz and Kroeber 2023). A possible election campaign effect could be swallowed up by this and the intensification of attacks would fit into these considerations. Future research could address these ambiguities by differentiating between attack types – for example, general vs. policy-related. Alternatively, it would also be conceivable for MPs to focus their attention and energy on other campaign platforms from which they expect a greater impact. This would result in a reduced campaign commitment in the National Council and thus a smaller chance for negative campaigning.

The second hypothesis, according to which MPs are less likely to resort to negative campaigning during periods of government formation at national level, can be at least partially accepted based on the present data and the estimated model. Indeed, the probability of an attack is reduced in such a period, even if the average intensity of the attacks remains unchanged. Again, it is unclear what proportion of the effect is due to the formation of the government and what proportion is due to a lower incidence of debatable policies – as no government has yet been formed and therefore no government programme exists.

At the state level, unexpected patterns emerge with regard to government formation processes and election campaigns. During periods of state election campaigns, attacks are not only less

likely, but also less intense on average. The third hypothesis, according to which MPs use negative campaigning to a greater extent in parliamentary debates in the run-up to state elections, can therefore not be accepted. There are many possible reasons for the observed contrary effect. As national political issues are more often polarising and less emotionally charged than national issues (Zingher and Richman 2019), debates in the National Council could be pacified as a result. It is also conceivable that the state parties in countries where election campaigns are taking place may not want support in the form of negative campaigning, as negative rhetoric from a national MP could reflect negatively on the state parliamentary candidates.

The effect of coalition formation processes is also contrary to the theoretical expectations. The model suggests that attacks are more likely the more government formation processes at state level are taking place at the time of the speech. The same applies to the intensity of the attacks: the more government formation processes at state level at the time of the speech, the more intense the attacks are. Consequently, the fourth hypothesis, according to which negative campaigning in the National Council is to be expected to a lesser extent in times of state government formations, cannot be accepted either. This may be due to certain characteristics of these coalition negotiations. For example, after the 22 state parliamentary elections in the period under review, eight coalitions were formed incongruently with the federal coalition,⁵² i.e. with one party belonging to the national government and at least one party belonging to the national opposition. This is quite unusual (Deschouwer 2009; Olislagers and Steyvers 2015) and could have led to major disputes and attacks in the National Council. Furthermore, in fourteen cases there was an – at least partial – change of coalition,⁵³ i.e. a party switched from the state government to the state opposition. This could also have led to resentment and an increase in attacks in parliamentary debates at national level.

When evaluating the influence of incumbency, mixed and sometimes unexpected results emerge. The first part of the model shows that MPs who belong to a national governing party are indeed less likely to use negative campaigning than members of opposition parties. With regard to the intensity of the attacks, the model shows that the national incumbent status makes no difference when an opposition party is attacked. The model also implies that when an opposition party attacks, its attacks are weaker if the target is a governing party. Finally, the

⁵² These are Vienna 2010, Tyrol 2013, Salzburg 2013, Vorarlberg 2014, Burgenland 2015, Vienna 2015, Tyrol 2018 and Salzburg 2018.

⁵³ These are Vorarlberg 2009, Upper Austria 2009, Styria 2010, Vienna 2010, Carinthia 2013, Lower Austria 2013, Tyrol 2013, Salzburg 2013, Vorarlberg 2014, Styria 2015, Burgenland 2015, Lower Austria 2018, Carinthia 2018 and Salzburg 2018. For states with a *Proporz* system, this refers to changing partners for working agreements – the equivalent of coalition agreements.

model suggests that there is a coalition effect at national level that mitigates attacks between governing parties. Consequently, the fifth hypothesis, according to which members of national governing parties use negative campaigning to a lesser extent, can be partially accepted. Hypothesis 9, which formulates expectations about the pacifying influence of coalitions, is also confirmed. Hypothesis 7, however, which states that national governing parties are to a greater extent targets of attacks, cannot be accepted. The unexpected effect observed can possibly be attributed to the fact that opposition parties refrain from attacking the government and possible future coalition partners in anticipation of a change of power. In order to test this, a more precise analysis is required that can differentiate attacks on the government by coalition partner. For instance, it could be analysed whether an opposition party attacks the governing party, which is closer to them, to a lesser extent. Alternatively, it is conceivable that attacks between opposition parties are particularly intense, as the opposition parties want to differentiate themselves more strongly from each other. This would be quite conceivable if two opposition parties address a similar electorate and use negative campaigning to win them over. Here too, a differentiation of the target in the opposition camp would be helpful.

At state level, incumbency seems to play little to no role. On the one hand, the probability of attacks in parliamentary speeches decreases if the speaker's party belongs to a government in a state in which an election campaign is taking place at the time of the speech. On the other hand, the other effects of incumbency at state level are all insignificant in terms of the intensity of attacks. Consequently, based on the model and data, the sixth hypothesis, according to which in the run-up to state elections the probability that the state governing party will resort to negative campaigning in the National Council debates is lower than for the state opposition parties, can be partially accepted. In contrast, the hypothesis on the incumbency status of the target at state level (hypothesis 8) and on the coalition effect at state level (hypothesis 10) cannot be accepted.

Based on the data and the estimated model, the origin of the speaker – i.e. whether she was nominated by a state party in a state in which a state election campaign was taking place at the time of the speech – does not appear to play a role. No significant effect was found neither for the probability of an attack nor for the intensity of the attacks. The eleventh hypothesis is therefore not accepted. Contrary to theoretical considerations, state parties may not expect their MPs to campaign in the National Council or to limit their campaigning to positive news.

There is an unexpected effect of the mode of government composition in states where election campaigning takes place at the time of a speech. Instead of a pacifying effect, attacks seem to be more likely the more states in which election campaigns are taking place compose their

government according to the *Proporz* system. The associated twelfth hypothesis can therefore also not be accepted. Contrary to theoretical considerations, the observed effect could be since all parties were involved in the previous state government. This offers more opportunities for attack overall, as all parties criticise all other parties regarding their time in government. This increases the chance of negative campaigning in the parliaments.

To summarise, it can be said that the majority of the hypotheses formulated cannot be accepted based on the calculated model and the presented data. In part, this is due to opposing directions from the two parts of the model; in part, however, the observed effects are completely contrary to the theoretical expectation. Both may be due to peculiarities at state and national level that were not taken into account in the model. In this case, further empirical research is needed to integrate these particularities into a more holistic model. However, it is also conceivable that the non-acceptance of the hypotheses is due to unspecified theoretical considerations. In this case, further theoretical work would be necessary.

In order to test the assumptions of the two combined models (Kohler and Kreuter 2016), the two-part model is firstly evaluated as a whole and secondly both parts are estimated separately with the respective assumptions being checked (Tian and Huang 2007). The holistic analysis of the two-part model performed indicates a weak fit of the model to the data. This is due (at least in part) to the lack of consideration of the hierarchical structure of the data.⁵⁴ Furthermore, problematic influential cases could also be responsible for the lack of fit. Finally, it is also conceivable that the number of national council and state parliament election campaigns, at three and 22 cases respectively, is too small for such an analysis. In this case, an extension of the analysed period would be advisable.⁵⁵

Testing the assumptions of the first part of the model – the LM – implies that the variables *Proporz* and government formation processes at state level violate the linearity assumption. To counter this, an additional control model was calculated: table A.5 in the appendix shows the results of this two-part model, whereby the two critical variables were included as factors in the model. It can be seen that the effect size and direction remain largely the same, while the fit of the model to the data is slightly better. To check the general fit of the model to the data, a Hosmer-Lemeshow test (Hosmer, Lemeshow, and Sturdivant 2013) was conducted, the results of which indicate an insufficient fit of the first part of the model to the data. As discussed above,

⁵⁴ The results of the control models in table A.3 in the appendix have confirmed the importance of the hierarchical structure of the data.

⁵⁵ This would be possible, for example, by combining the data presented with data from the *ParlSpeech* project (Rauh and Schwalbach 2020). This was not done in this study due to the limited computing power available.

this is probably primarily due to the inadequate consideration of the data structure and the comparatively small number of elections in the study period. In order to identify influential observations, Cook's D (Cook and Weisberg 1982) was calculated. The results can be found in figure A.8 in the appendix and show that there are 67939 outliers when compared with the limit value of $4/(N - k - 1)$.⁵⁶ When comparing the values with each other (Fox 2019), three days in particular stand out due to influential cases. This indicates special contexts for these debate days, which should be considered in subsequent research.⁵⁷

A review of the assumptions of the second part of the model – the GLM – also reveals some violations. For the state-level campaign variable, the scaled GVIF, see table A.6 in the appendix, exceeds the threshold of 3.2, indicating multicollinearity. This is probably due to the high correlation of the variables at the state level, in particular the number of election campaigns and the number of governments in which the sponsor or target is represented. This is since the SPÖ and ÖVP were involved in almost all governments in states where an election took place.⁵⁸ To ensure that such variables can be tested simultaneously in a model without problems, the number of cases of the state elections analysed should also be increased – provided that the government participation of the two people's parties varies here. Cook's D was again used to assess the influence of outliers. The graphical representation can be found in the appendix in figure A.9. A comparison with the corresponding threshold value shows that there are 5217 influential observations in the data set, but these are not as extreme when compared with each other and are therefore less problematic for the second part of the model (cf. Fox 2019).

Further problems arise when analysing the residuals: the quantile-quantile plot in figure A.10 in the appendix shows that the normal distribution assumption of the residuals is violated. An adjustment of the link function used to avoid this assumption does not provide any improvement and was therefore excluded. Instead, robust standard errors were calculated to prevent distorted test statistics and hypothesis tests. To check whether the variance of the disturbance terms is constant, i.e. homoscedasticity is present, a Breusch-Pagan test was performed, and residuals were plotted against predicted values, see figure A.11 in the Appendix. Both the graphical view and the results of the test indicate that heteroscedasticity is present. Here too, the choice of

⁵⁶ Here, N is the number of cases and k is the number of estimated coefficients in the model.

⁵⁷ In addition to linearity, general fit and outliers, multicollinearity and overdispersion were also tested. The calculated scaled variance inflation factor (Fox and Monette 1992), see table A.6 in the appendix, shows no abnormalities when compared with the limit value of 3.2 (Nahhas 2024, para. 5.20). The Pearson χ^2 test carried out (Coxe, West, and Aiken 2009, 131–32) does not indicate any overdispersion.

⁵⁸ See table 3.2 in section 3.1 for an overview.

robust standard errors should improve the estimates of the standard errors and thus the reliability of the inference.⁵⁹

To summarise, it is evident that the presented model has some difficulties in adapting to the data. This is partly due to the inadequate software development for two-part models in R, which, for example, does not allow hierarchical data structures to be taken into account. Furthermore, the small number of state and federal elections considered leads to problems in the model, as there is little variance in the state variables in particular. The reported coefficients, predictions and test statistics should therefore be treated with caution and the results should be interpreted with reservations.

⁵⁹ The GLM was also checked regarding the linearity assumption. The reset test (Ramsey 1969) carried out shows no anomalies. The second part of the model also seems to fit the data well, as the Hosmer-Lemeshow test (Hosmer, Lemeshow, and Sturdivant 2013) carried out shows.

5. Conclusion

In this study, the question of how federal and state elections influence the use of negative campaigning in parliamentary debates was investigated. To this end, theoretical strands from the rational choice theory (Shepsle 2010) and multi-level electoral research (Golder et al. 2017) were interwoven with an explanatory approach to the speaking behaviour of MPs (Bäck and Debus 2016; Proksch and Slapin 2014). Empirically testable hypotheses were derived with reference to the party organisational structure and the systemic structure in Austria. In addition to the influence of government formation processes and election campaigns at both national and sub-national levels, expectations were formulated regarding the role of incumbency at these two levels. Furthermore, considerations were made on the influence of the origin of MPs and the mode of government formation at state level.

To test these hypotheses, stenographic transcripts of the Austrian National Council (Sylvester, Greene, and Ebing 2022a) were combined with data from the Austrian states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), *Statistik Austria* (2023), the *Chapel Hill Expert Survey* (Jolly et al. 2022a) and the Austrian Parliamentary Directorate (Republic of Austria Parliamentary Directorate 2024a, 2024b). After adjustment, a total of 1.33 million sentences from 104,029 speeches by 432 speakers from seven parties remained in the data set. To measure the dependent variable negative campaigning, a dictionary (Haselmayer and Jenny 2017, 2020), which contains words and associated sentiment scores, was combined with an approach for identifying named entities (K. Benoit, Matsuo, and Gruber 2023; Honnibal 2024). The resulting data were then analysed descriptively and inferentially – in bi- and trivariate preliminary analyses and using a two-part model (Belotti et al. 2015).

The results of the analysis show that members of the Austrian National Council do make use of negative campaigning in everyday parliamentary debates. However, based on the analysed data and the estimated multivariate model, a large part of the hypotheses formulated in the theory section cannot be accepted. Although most of the effects identified are significant, the majority do not point in the expected direction. However, it can be observed that less use is made of negative campaigning during national government formation processes in National Council debates than at other times of the legislative period. It also shows that parties that are part of the national government are less likely to use negative campaigning. In addition, attacks by such parties against their coalition partners are weaker than those directed against the

opposition. Moreover, parties that are represented in governments in states where election campaigns are taking place are less likely to use negative campaigning than the other parties. To summarise, it can be concluded that both state and federal elections play a role in the use of negative campaigning in parliamentary debates, but to a lesser or unexpected extent. Overall, however, the reported results should be treated with caution, as the model used has major problems fitting the data.

To my knowledge, this study is the first to analyse negative campaigning in parliamentary speeches. Its findings extend existing literature on the use of negative campaigning in day-to-day politics, particularly in a parliamentary context (Curini and Martelli 2010; Ketelaars 2019; Poljak 2023b; Poljak and Walter 2023). Research on the strategic use of parliamentary debates for election campaign purposes (Proksch and Slapin 2014) is also expanded. The results also suggest systematic influences of variables at the state level, in particular government formation processes and election campaigns at the sub-national level – even the associated effects do not point in the theorised direction. Furthermore, this work contributes to the field of research on negative campaigning by developing an approach for the automated measurement of negative campaigning in large sets of textual data through a combination of sentiment analysis and named entity recognition.

However, the results of this study are subject to far-reaching limitations. Firstly, as this study is an initial exploration of negative campaigning in parliamentary debates, the theoretical discussion focussed mainly on general effects. Further-reaching interaction effects, for example between sub-national and national levels, were put aside. The special features of government formation processes and election campaigns at national and state level were also not discussed further and instead it was assumed that these all influence the speaking behaviour of MPs equally. The role of individual MPs (e.g. Ketelaars 2019) was also insufficiently considered. Secondly, there are limitations due to the case selection: for one, the study focusses solely on Austria. Due to the particular importance of the organisational structure of parties and systemic factors that play a role in the transfer of state party interests to the national level, the theoretical considerations and results cannot be easily transferred to other federal states. Because of the variance of these central factors between states, the theory and methodology must be adapted accordingly. Furthermore, due to the computing power available, the study period was limited to the years 2009 to 2019. Although the study analyses a relatively large number of speeches, it only covers a limited period of time. This means that the results can only be applied to other points in Austrian history with reservations; again, with reference to changing contextual factors such as political culture or international contexts.

Thirdly, the chosen methodology has some weaknesses. For instance, the automatic analysis of text data can lead to incorrect measurements both with regard to sentiment analysis and the recognition of named entities. In the sentiment analysis, it is particularly the underlying word-of-bags assumption that may assign the negativity in a sentence to the wrong entity. In addition, only parts of the entities found were assigned to the parties, which in turn can lead to non-coding of negative campaigning. The chosen methodology also means that the approach can only be transferred directly to other German-speaking countries. Furthermore, the use of the two-part model presented is inadequate under the current conditions – e.g. without the possibility of taking the hierarchical structure of the data into account. The model is not sufficiently adapted to the data, which impairs the reliability of estimated coefficients, predictions and calculated test statistics.

Due to the manifold limitations of this work, but also due to the lack of comparable studies on negative campaigning in parliamentary debates, there are many points of departure for future research. Firstly, further adjustments of the model to the structure of the data are necessary. Secondly, as already mentioned in the discussion, a refinement of the data structure is required: this includes further contextual factors of speech that influence the use of attacks against opposing parties. But also the role of characteristics of MPs is certainly worth further research. In addition, a categorisation of attacks – e.g. character and issue attacks (Nai, Tresch, and Maier 2022) – would possibly further improve the understanding of attacks in parliament. Third, the observed unexpected effects, e.g. of government formation processes and election campaigns at the sub-national level, point to gaps in the theoretical foundation of this work and require explanation. Fourthly, there is room for improvement with regard to the measurement of negative campaigning. For example, methods based on neural networks (cf. Jenny, Haselmayer, and Kapla 2021), in combination with named entity recognition, could provide progress here. Fifthly, the analysis of an extended study period or parliamentary debates from other countries is necessary to deepen the understanding of negative campaigning in parliamentary debates. Finally, as with negative campaigning during ordinary election campaigns, the potentially detrimental effects on the electorate and political culture should be further researched. Only through a combined knowledge of the use of negative campaigning in parliaments and its effects is it possible to implement any necessary countermeasures to prevent the erosion of the democratic system.

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Appendix

A.1 Tables

Table A.1: Negation and intensifier dictionary

Dictionary	Words
Negations	<i>ebensowenig, kaum, kein, keine, keinem, keinen, keiner, keinerlei, keines, keinesfalls, keineswegs, keinstenfalls, nein, nicht, nichts, nie, niemals, niemand, nimmer, nirgends, nirgendwo, ohne, schwerlich, selten, weder, wenig, weniger</i>
Intensifiers	<i>absolut, allgegenwärtig, allzu, atemberaubend, ausdrucksvoll, ausführlich, ausgeprägt, ausgesprochen, ausreichend, außergewöhnlich, außerordentlich, äußerst, beachtlich, bedeutend, beeindruckend, beispiellos, bemerkenswert, besonders, beträchtlich, bündig, dauerhaft, deutlich, dramatisch, drastisch, eindeutig, eindringlich, eindrucklich, einzigartig, eklatant, enorm, erfüllend, erheblich, erstaunlich, exorbitant, extensiv, extrem, exzeptionell, exzessiv, fortlaufend, fulminant, furchtbar, ganz, ganz und gar, gänzlich, gewaltig, gewichtig, gewissenhaft, gigantisch, glühend, grandios, grenzenlos, großartig, gründlich, hartnäckig, haushoch, heftig, herausragend, hervorstechend, himmelhoch, hochgradig, höchst, intensiv, irreversibel, kolossal, konsequent, konstant, kräftig, krass, kristallklar, lauter, lebhaft, leidenschaftlich, mächtig, massenhaft, massiv, maximal, mega, merklich, methodisch, monströs, müheless, nachdrücklich, nachhaltig, nachweisbar, nachweislich, offenkundig, penibel, phänomenal, prägnant, provozierend, qualitativ, radikal, richtig, riesig, schlagartig, schlagkräftig, schonungslos, schwer, schwerwiegend, sehr, sensationell, sichtlich, signifikant, spektakulär, spürbar, ständig, stark, super, tief, tiefergehend, tiefgreifend, total, überaus, überbordend, überdeutlich, überdurchschnittlich, überflüssig, überlegen, übermäßig, überragend, überraschend, überschwänglich, übertrieben, überwältigend, überwiegend, überzeugend, umfangreich, umfassend, umwerfend, unablässig, unaufhörlich, unbedingt, unbegrenzt, unermesslich, unermesslich, unfassbar, ungebremst, ungeheuer, ungemein, ungeteilt, ungewöhnlich, unglaublich, unglaublicherweise, unmissverständlich, unmittelbar, unschätzbar, unüberhörbar, unübersehbar, ununterbrochen, unverdorben, unvergleichlich, unverhohlen, unvermindert, unverzichtbar, unwiderlegbar, unwiderlegt, unwidersprochen, unwiderstehlich, unzweifelhaft, verblüffend, verdammt, viel, vollends, völlig, vollkommen, vollständig, vorsätzlich, wachsend, weitaus, weitestgehend, wesentlich, wirklich, ziemlich, zügig, zusätzlich, zutiefst, zwingend</i>
Notes:	This table shows the two dictionaries of negations and intensifiers based on the considerations of Haselmayer and Jenny (2017) and supplemented with suggestions from the literature (Klenner, Fahrni, and Petrakis 2009; Wiegand, Wolf, and Ruppenhofer 2018) and ChatGPT (OpenAI 2024).

Table A.2: Variables included in the model

Variable Type	Name	Description	Scale	Values
Dependent	<i>Negative Campaigning</i>	Degree of negativity of the political attack	continuous	
Independent	<i>Campaign National Council</i>	Election campaign for National Council	dichotomous	1, if speech held during a National Council election campaign
Independent	<i>Government formation National Council</i>	Coalition formation at national level	dichotomous	1, if speech held during coalition negotiations at national level
Independent	<i>Campaign federal state</i>	Election campaign in a federal state	count variable	Number of states where an election campaign takes place at the time of the speech.
Independent	<i>Government formation federal state</i>	Coalition formation at federal state level	count variable	Number of states where a coalition formation takes place at dring the speech.
Independent	<i>Incumbency status sponsor national level</i>	Incumbency status of the attacking party at national level	dichotomous	1, if sponsor is part of the coalition at national level
Independent	<i>Incumbency target sponsor national level</i>	Incumbency status of the attacked party at national level	dichotomous	1, if target is part of the coalition at national level
Independent	<i>Incumbency status sponsor state level</i>	Incumbency status of the attacking party at federal state level	count variable	Number of states where the attacking party belongs to the state government and where an election campaign takes place at the time of the speech
Independent	<i>Incumbency status target state level</i>	Incumbency status of the attacked party at federal state level	count variable	Number of states where the attacked party belongs to the state government and where an election campaign takes place at the time of the speech
Independent	<i>National coalition</i>	Coalition status of sponsor and target at national level	dichotomous	1, if target and sponsor are part of the coalition at national level an election campaign takes place at the time of the speech and target and sponsor are part of the government
Independent	<i>State coalition</i>	Coalition status of target and sponsor at state level	count variable	Number of states where target and sponsor are part of government and a election campaign takes place at the time of the speech
Independent	<i>Origin</i>	Origin of the speaker	dichotomous	1, if the speaker comes from the federal state in which there is an election campaign at the time of his speech
Independent	<i>Proporz</i>	Mode of government formation at the state level	count variable	Number of states with <i>Proporz</i> system and where an election campaign takes place at the time of the speech.

Control	<i>State size</i>	Population size of the federal state in which the election takes place	continuous	Sum of the population size in all the states where an election campaign takes place at the time of the speech.
Control	<i>Party size</i>	Seat share of the attacked party	continuous	Seat share of the attacked party in the National Council during the speech
Control	<i>Distance economic</i>	Ideological distance between attacking party and attacked party on the economic axis	continuous	Absolute distance between attacking and attacked party on the economic axis
Control	<i>Distance Galtan</i>	Ideological distance between attacking party and attacked party on the cultural axis	continuous	Absolute distance between attacking and attacked party on the cultural axis
Control	<i>EU</i>	Election campaign EU	dichotomous	1, if speech held during an EU election campaign
Control	<i>Retaliation</i>	Level of negativity in the previous speeches	continuous	Number of negative statements against the speakers party at the day of the speech up to the speech
Control	<i>Party</i>	Party the speaker belongs to	categorical	Classification according to Bevan (2019)
Control	<i>Topic</i>	Topic on which is spoken	categorical	
Control	<i>Gender</i>	Gender of the attacking MP	dichotomous	1, if the sponsor is male 0, if the sponsor is female
Control	<i>Date</i>	Date on which the speech was given	continuous	

Data: Data from the *ParlEE plenary speeches* (Sylvester, Greene, and Ebing 2022a), the *Chapel Hill Expert Survey* (Jolly et al. 2022a), the National Council Austria (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024).

Notes: This table lists all variables that will be integrated into the model in the later analysis. Besides the name, a short description of the variables, their scales and their possible values are given. The variable type indicates which role the variable will play in the model.

Table A.3: Results of the hierarchical LM and GLM

Variables	<i>Hierarchical LM</i>	<i>Hierarchical GLM</i>
Campaign National Council (1 = speech during national election campaign)	-0.0059 (0.0013)***	0.0442 (0.0106)***
Government formation National Council (1 = speech during national government formation)	-0.0304 (0.0017)***	0.0071 (0.0151)
Campaign federal state (number of state election campaigns during speech)	-0.0038 (0.0009)***	-0.0293 (0.0103)**
Government formation federal state (number of state government formations during speech)	0.0022 (0.0004)***	0.0081 (0.0028)**
Incumbency status sponsor national level (1 = speaker part of national governing party)	-0.0383 (0.0010)***	-0.0022 (0.0092)
Incumbency status target national level (1 = target part of national governing party)		-0.0396 (0.0076)***
Incumbency status sponsor federal state level (number of states where campaign takes place and speaker belongs to a governing party)	0.0023 (0.0007)**	0.0093 (0.0113)
Incumbency status target federal state level (number of states where campaign takes place and target belongs to a governing party)		0.0071 (0.0094)
Coalition at national level (1 = target and sponsor part of national governing party)		-0.0960 (0.0082)***
Coalition at federal state level (number of states where campaign takes place and target & sponsor belong to governing coalition)		0.0014 (0.0134)
Origin (1 = campaign in the state where speaker is from)	0.0057 (0.0017)***	-0.009 (0.0130)
<i>Proporz</i> (number of states where campaign takes place and government is formed by <i>Proporz</i>)	0.0063 (0.0009)***	-0.0113 (0.0067)
Intercept	0.0251 (0.0085)**	2.0223 (0.0350)***
Random Intercept Party x Speaker	0.000515 (0.0227)	0.0041 (0.0643)
Random Intercept Party	0.000347 (0.0186)	0.0000 (0.0000)
Residual	0.051893 (0.2278)	0.2256 (0.4750)
Akaike information criterion (AIC)	-163755	131117
N	1368938	96620

Data: Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a).

Notes: Logistic regression parameters (LM) and linear regression parameters (GLM) are given with standard errors in brackets. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. For all models, negativity is the dependent variable (dichotomous for LM, continuous for GLM). Reported coefficients and statistical measures are rounded to four decimal places. In the logit model, the variables EU, retaliation, size of the speaker's party, gender of the speaker, date, party of the speaker, policy area spoken about and population size of the states in which an election takes place were controlled for. In the GLM, the ideological distance between the sponsor and the target of the attack was additionally controlled for.

Table A.4: Results of the two-part model with binary state-level variables

Variables	First part: <i>Logit model</i>	Second part: <i>GLM</i>
Campaign National Council (1 = speech during national election campaign)	-0.1846 (0.0270)***	0.0492 (0.0107)***
Government formation National Council (1 = speech during national government formation)	-0.4329 (0.0326)***	0.0225 (0.0150)
Campaign federal state (1 = speech during state election campaign)	-0.0643 (0.0213)**	-0.0271 (0.0126)*
Government formation federal state (1 = speech during state government formation)	0.0968 (0.0111)***	0.0133 (0.0043)**
Incumbency status sponsor national level (1 = speaker part of national governing party)	-1.3140 (0.0187)***	0.0138 (0.0083)
Incumbency status target national level (1 = target part of national governing party)		-0.0382 (0.0075)***
Incumbency status sponsor federal state level (1 = sponsor part of national governing party in state where campaign takes place)	-0.0365 (0.0237)	0.0082 (0.0158)
Incumbency status target federal state level (1 = target part of national governing party in state where campaign takes place)		0.0082 (0.0133)
Coalition at national level (1 = target and sponsor part of national governing party)		-0.1073 (0.0081)***
Coalition at federal state level (1 = target & sponsor belong to governing coalition in state where campaign takes place)		0.0020 (0.0181)
Origin (1 = campaign in the state where speaker is from)	0.0145 (0.0340)	-0.0181 (0.0129)
<i>Proporz</i> (1 = government is formed by <i>Proporz</i> in at least one of the states where campaign takes place)	0.1848 (0.0236)***	-0.0048 (0.0088)
Intercept	-4.6396 (0.0736)***	1.9642 (0.0278)***
Null deviance	698534	22467
Residual deviance	459413	22140
Akaike information criterion (AIC)	459495	131932
N	1368938	96620

Data: Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a).

Notes: Logistic regression parameters (LM) and linear regression parameters (GLM) are given with standard errors in brackets. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. For all models, negativity is the dependent variable (dichotomous for LM, continuous for GLM). Reported coefficients and statistical measures are rounded to four decimal places. In the logit model, the variables EU, retaliation, size of the speaker's party, gender of the speaker, date, party of the speaker, policy area spoken about and population size of the states in which an election takes place were controlled for. In the GLM, the ideological distance between the sponsor and the target of the attack was additionally controlled for.

Table A.5: Results of the two-part model with resolved linearity issues

Variables	First part: <i>Logit model</i>	Second part: <i>GLM</i>
Campaign National Council (1 = speech during national election campaign)	-0.1773 (0.0267)***	0.0486 (0.0106)***
Government formation National Council (1 = speech during national government formation)	-0.4219 (0.0327)***	0.0232 (0.0150)
Campaign federal state (number of state election campaigns during speech)	-0.0038 (0.0009)***	-0.0300 (0.0106)**
Government formation federal state = 1 (1 = one state government formation during speech)	0.0835 (0.0173)***	0.0041 (0.0051)
Government formation federal state = 2 (1 = two state government formations during speech)	0.0807 (0.0193)***	0.0257 (0.0072)***
Government formation federal state = 3 (1 = three state government formations during speech)	0.5001 (0.0461)***	0.0156 (0.0191)
Incumbency status sponsor national level (1 = speaker part of national governing party)	-1.3116 (0.0187)***	0.0138 (0.0083)
Incumbency status target national level (1 = target part of national governing party)		-0.0377 (0.0075)***
Incumbency status sponsor federal state level (number of states where campaign takes place and speaker belongs to a governing party)	-0.0260 (0.0171)	0.0086 (0.0113)
Incumbency status target federal state level (number of states where campaign takes place and target belongs to a governing party)		0.0055 (0.0095)
Coalition at national level (1 = target and sponsor part of national governing party)		-0.1075 (0.0081)***
Coalition at federal state level (number of states where campaign takes place and target & sponsor belong to governing coalition)		0.0229 (0.0129)
Origin (1 = campaign in the state where speaker is from)	0.0184 (0.0341)	
<i>Proporz</i> = 1 (1 = government is formed by <i>Proporz</i> in one of the states where campaign takes place)	0.1856 (0.0237)***	-0.0006 (0.0087)
<i>Proporz</i> = 2 (1 = government is formed by <i>Proporz</i> in two of the states where campaign takes place)	0.2363 (0.0393)***	-0.0409 (0.0154)**
Intercept	-4.5453 (0.0743)***	1.9663 (0.0280)***
Null deviance	698534	22467
Residual deviance	459320	22135
Akaike information criterion (AIC)	459408	131919
N	1368938	96620

Data: Own calculation based on data from the *ParlEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a).

Notes: Logistic regression parameters (LM) and linear regression parameters (GLM) are given with standard errors in brackets. Significance levels: *** p < 0.001, ** p < 0.01, * p < 0.05. For all models, negativity is the dependent variable. In the logit model, the variables EU, retaliation, size of the speaker's party, gender of the speaker, date, party of the speaker, policy area spoken about and population size of the states in which an election takes place were controlled for. In the GLM, the ideological distance between the sponsor and the target of the attack was additionally controlled for.

Table A.6: Generalized variance inflation factor (GVIF) to test for multicollinearity

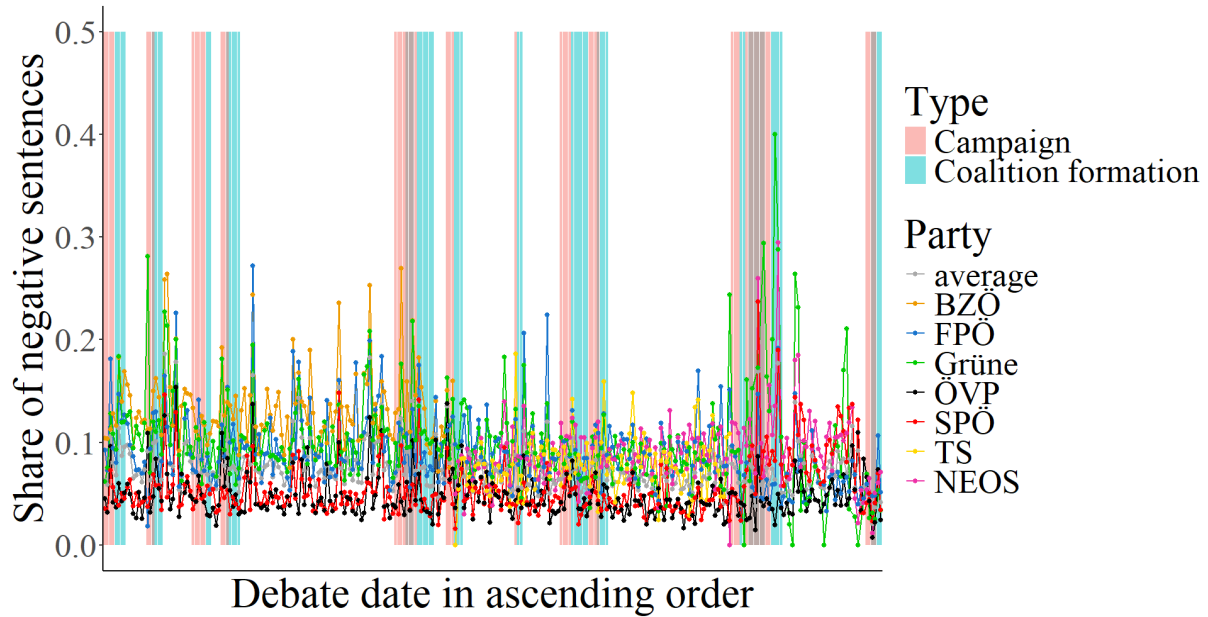
Variables	First part: <i>Logit model</i> GVIF	Second part: <i>GLM</i> GVIF
Campaign National Council (1 = speech during national election campaign)	1.0771 (1.0378)	1.0683 (1.0346)
Government formation National Council (1 = speech during national government formation)	1.0528 (1.0260)	1.1874 (1.0904)
Campaign federal state (number of state election campaigns during speech)	5.7765 (2.4034)	15.3137 (3.9133)
Government formation federal state (number of state government formations during speech)	1.0460 (1.0227)	1.0501 (1.0253)
Incumbency status sponsor national level (1 = speaker part of national governing party)	2.5561 (1.599)	6.148 (2.4798)
Incumbency target sponsor national level (1 = target part of national governing party)		4.5903 (2.1422)
Incumbency status sponsor federal state level (number of states where campaign takes place and speaker belongs to a governing party)	1.6211 (1.2732)	7.4154 (2.7231)
Incumbency target sponsor federal state level (number of states where campaign takes place and target belongs to a governing party)		9.4974 (3.0823)
Coalition at national level (1 = target and sponsor part of national governing party)		3.4746 (1.8647)
Coalition at federal state level (number of states where campaign takes place and target & sponsor belong to governing coalition)		6.3718 (2.5249)
Origin (1 = campaign in the state where speaker is from)	1.2194 (1.1043)	1.2364 (1.1125)
<i>Proporz</i> (number of states where campaign takes place and government is formed by <i>Proporz</i>)	2.2345 (1.4948)	2.2167 (1.4891)

Data: Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a).

Notes: Generalized variance inflation factor (GVIF) for the two parts of the two-part model. For terms with one degree of freedom the usual variance inflation factors (VIF) are calculated. The scaled GVIFs are given in brackets.

A.2 Figures

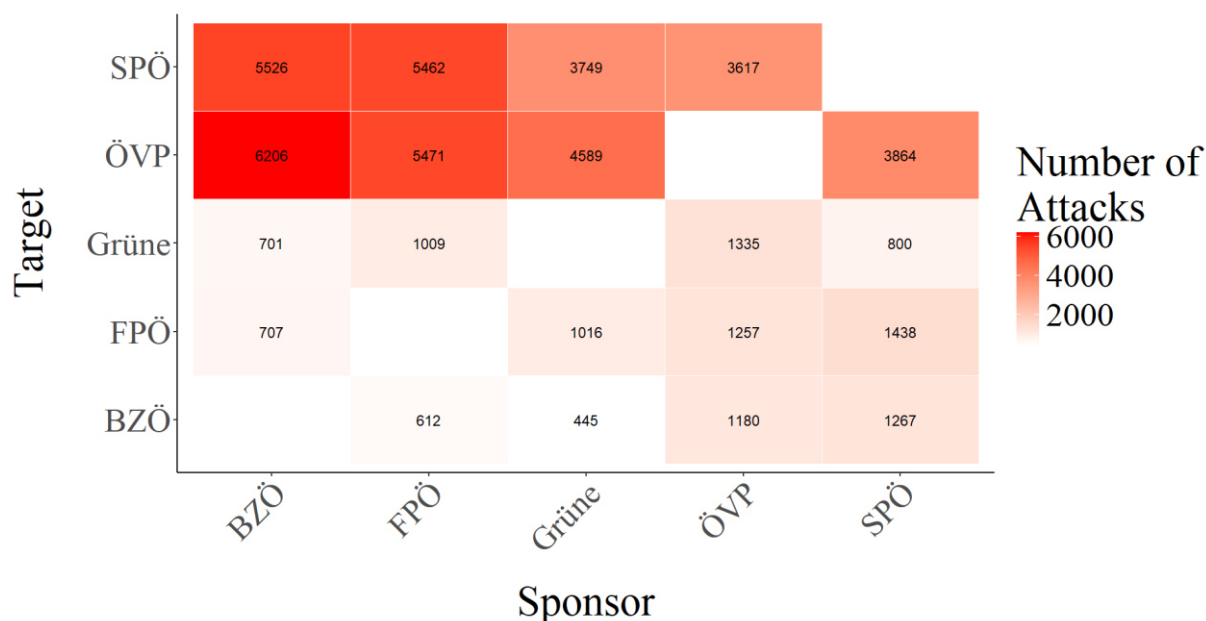
Figure A.1: Proportion of negative attacks in speeches in the National Council over time and by party



Data: N= 1368938; Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023).

Notes: The figure shows the share of attacks in the total number of statements over time and by party. The average value is shown in gray. The x axis shows the dates of the National Council's session days in ascending order. Red and blue indicate whether an election campaign was taking place at the time of the speech (at national or state level) or whether a government formation was taking place (also at national or state level).

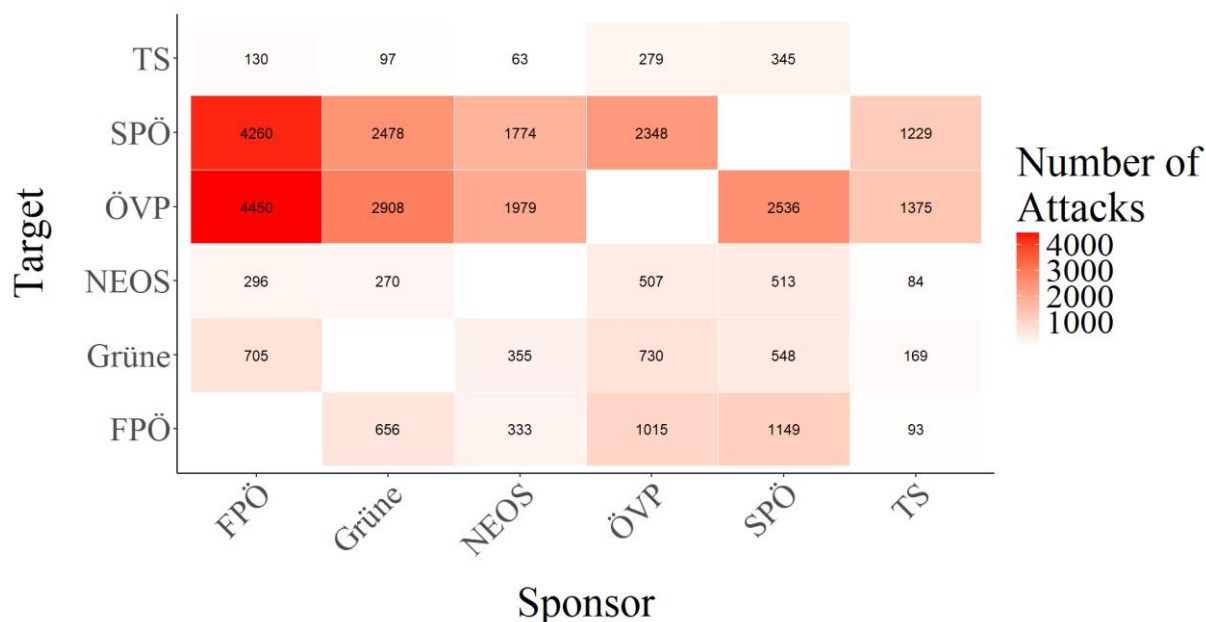
Figure A.2: Heat map of attacks across parties in the 24th legislative term



Data: N= 50521. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the number of attacks by party and their target in the 24th legislative term. The redder the field, the more this combination of sponsor and target is characterized by negative campaigning.

Figure A.3: Heat map of attacks across parties in the 25th legislative term



Data: N= 33674. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the number of attacks by party and their target in the 25th legislative term. The redder the field, the more this combination of sponsor and target is characterized by negative campaigning.

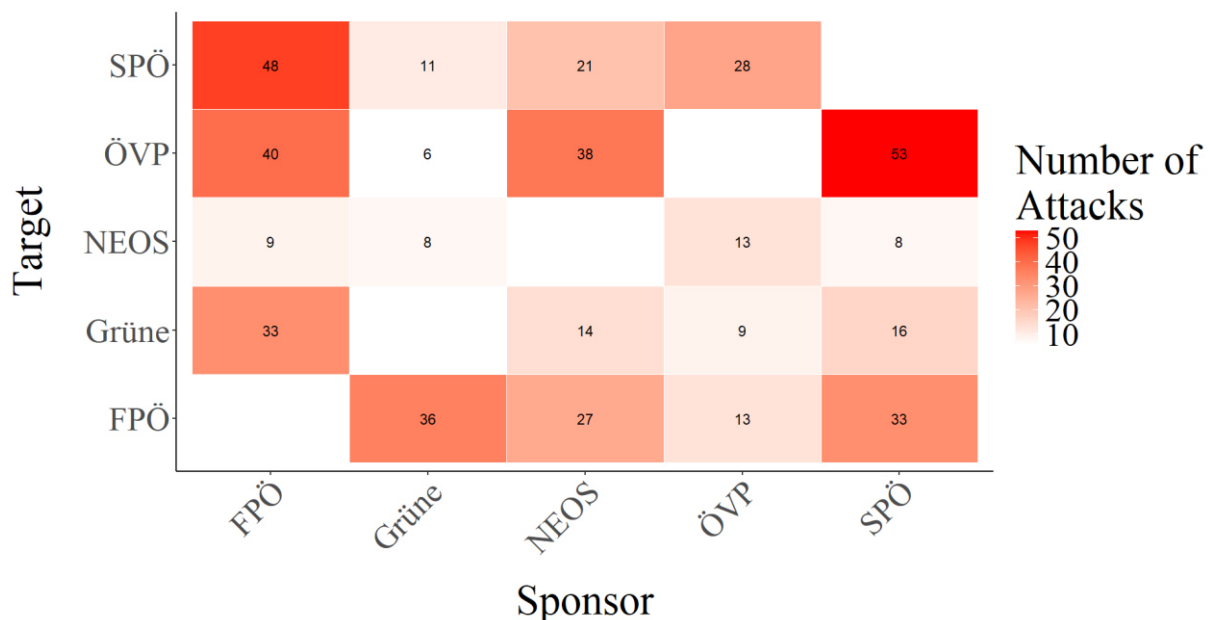
Figure A.4: Heat map of attacks across parties in the 26th legislative term



Data: N= 12231. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the number of attacks by party and their target in the 26th legislative term. The redder the field, the more this combination of sponsor and target is characterized by negative campaigning.

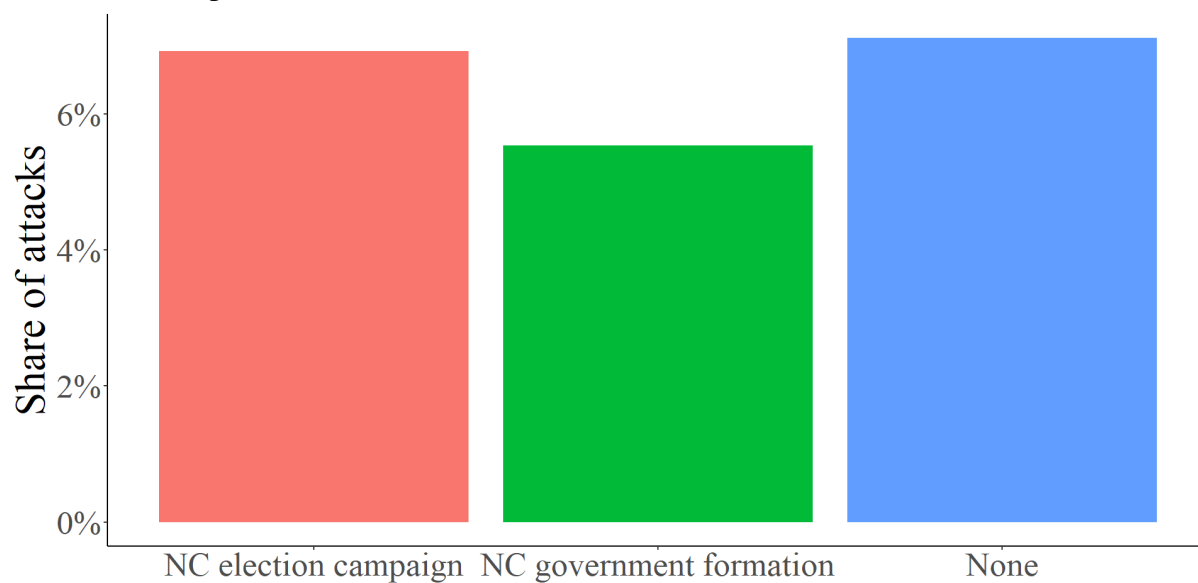
Figure A.5: Heat map of attacks across parties in the 27th legislative term



Data: N= 464. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows a heat map that depicts the number of attacks by party and their target in the 27th legislative term. The redder the field, the more this combination of sponsor and target is characterized by negative campaigning.

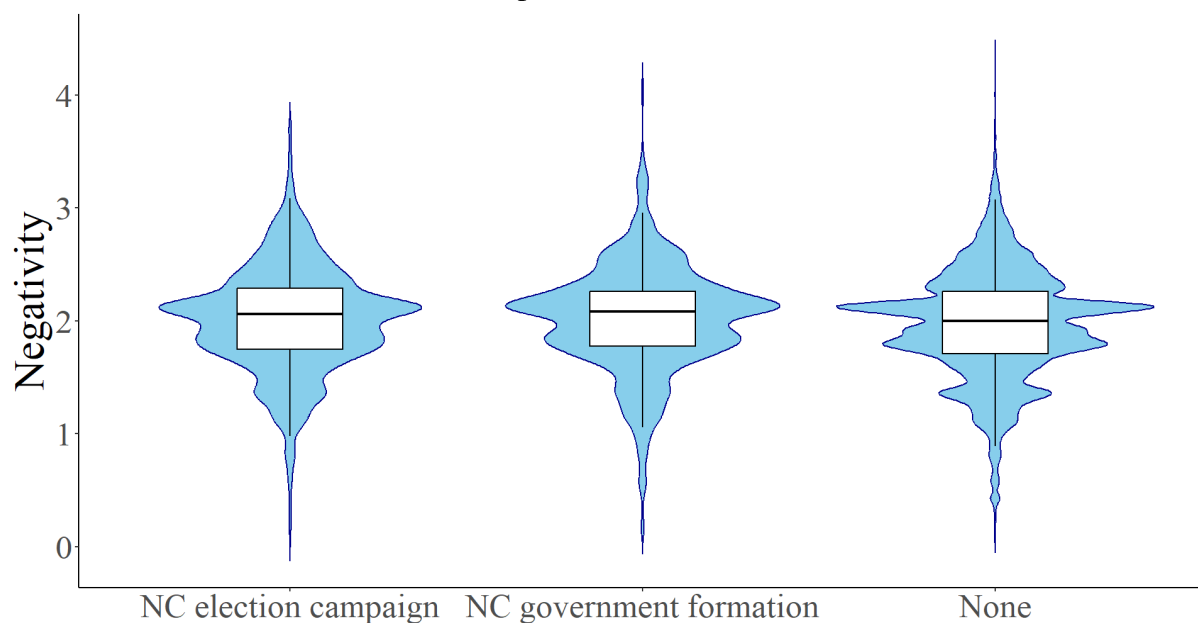
Figure A.6: Share of attacks across election campaigns and government formation processes at national level



Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a).

Notes: The figure shows a bar chart that reflects the proportion of negative statements in times of national election campaigns, national government processes and other times.

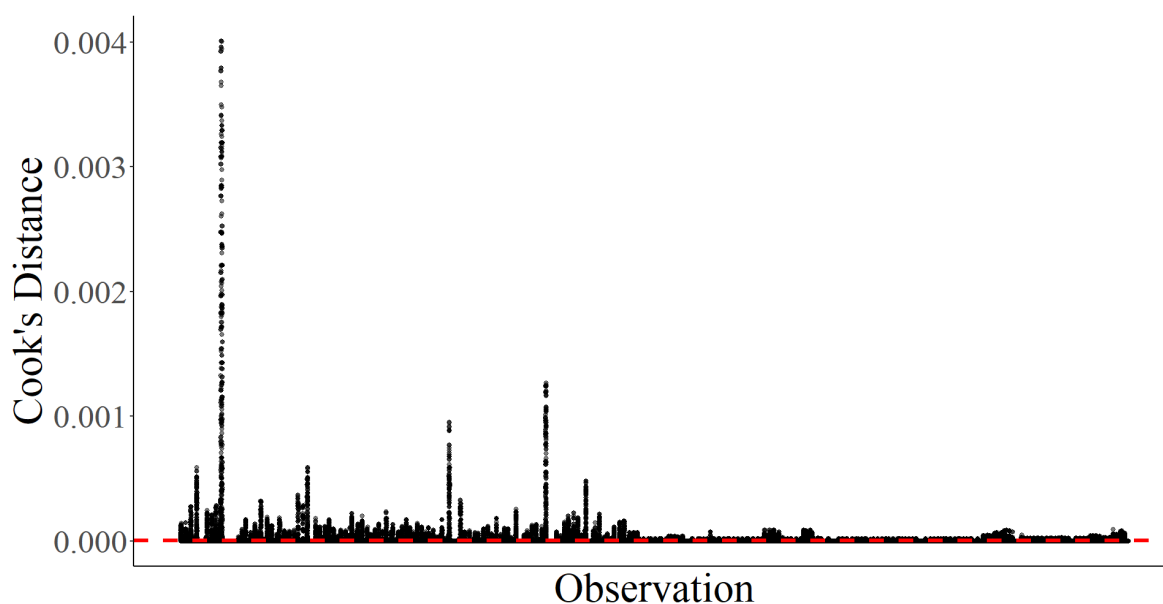
Figure A.7: Distribution of negative campaigning in times of national election campaigns and coalition formation processes



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Cases reduced to acts of negative campaigning.

Notes: The figure shows violin and box plots for times of national election campaign, national government formation process and otherwise. While the boxplots show the quartiles as well as the maximum and minimum, the violin plots provide a density estimate of negative campaigning for each party.

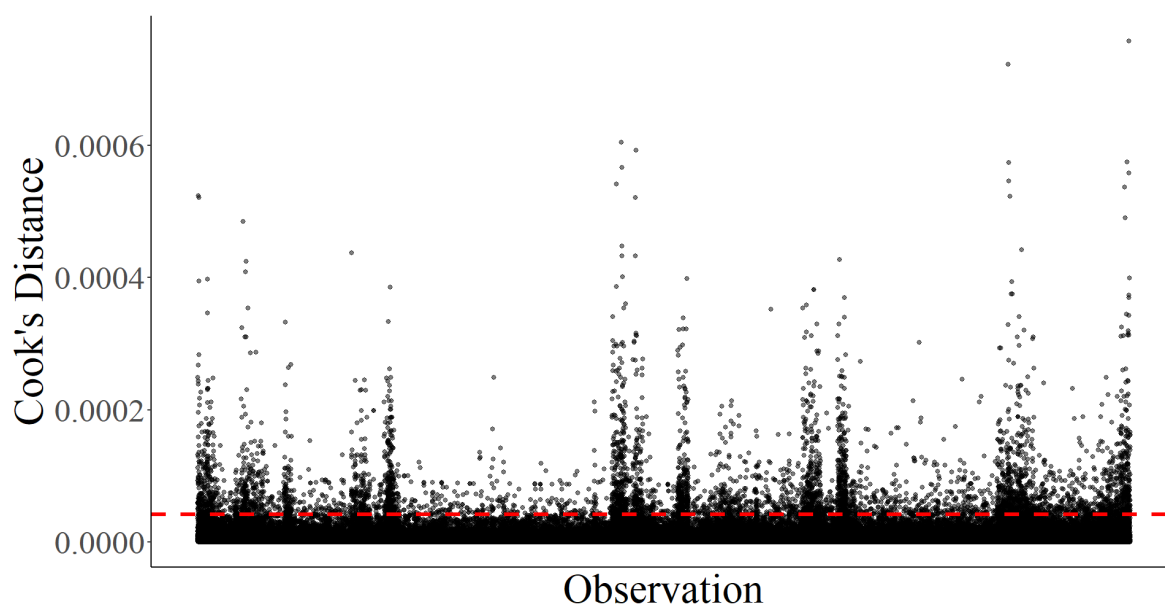
Figure A.8: Outlier analysis with Cook's D for logit model



Data: N = 1368938. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a).

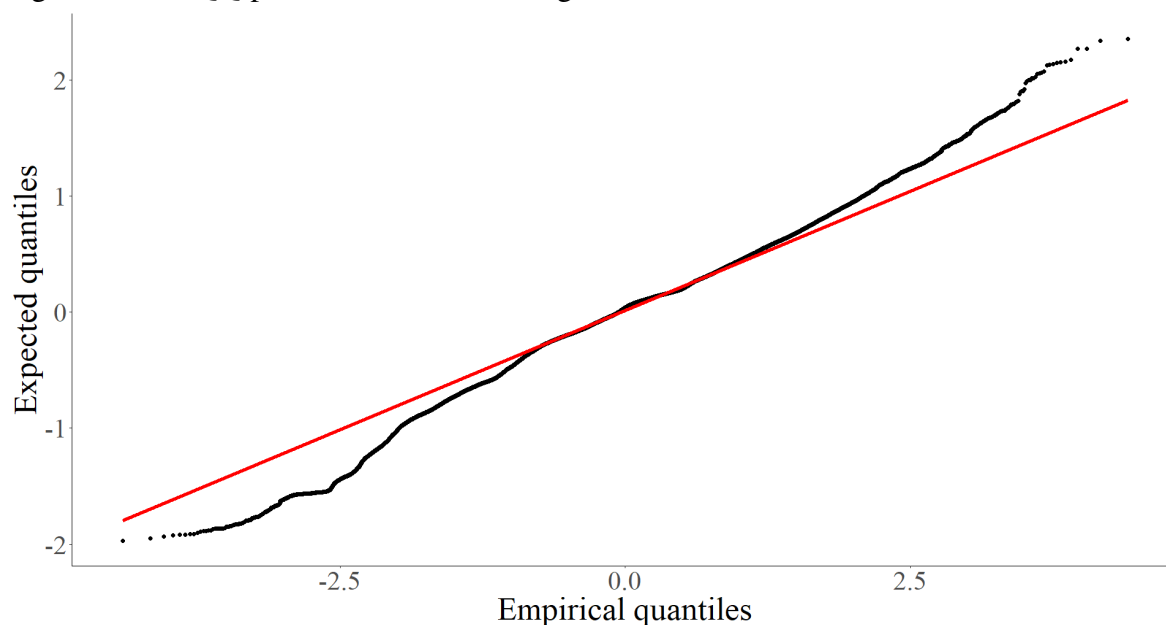
Notes: The figure shows Cook's D values for the first part of the two-part model, the logit model. The threshold value of $4/(N - k - 1)$ is shown in red. N is the number of cases and k is the number of coefficients calculated in the model.

Figure A.9: Outlier analysis with Cook's D for general linear model



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- Data:** N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the *spacyr* package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a). Cases reduced to attacks.
- Notes:** The figure shows Cook's D values for the second part of the two-part model, the GLM. The threshold value of $4/(N - k - 1)$ is shown in red. N is the number of cases and k is the number of coefficients calculated in the model.

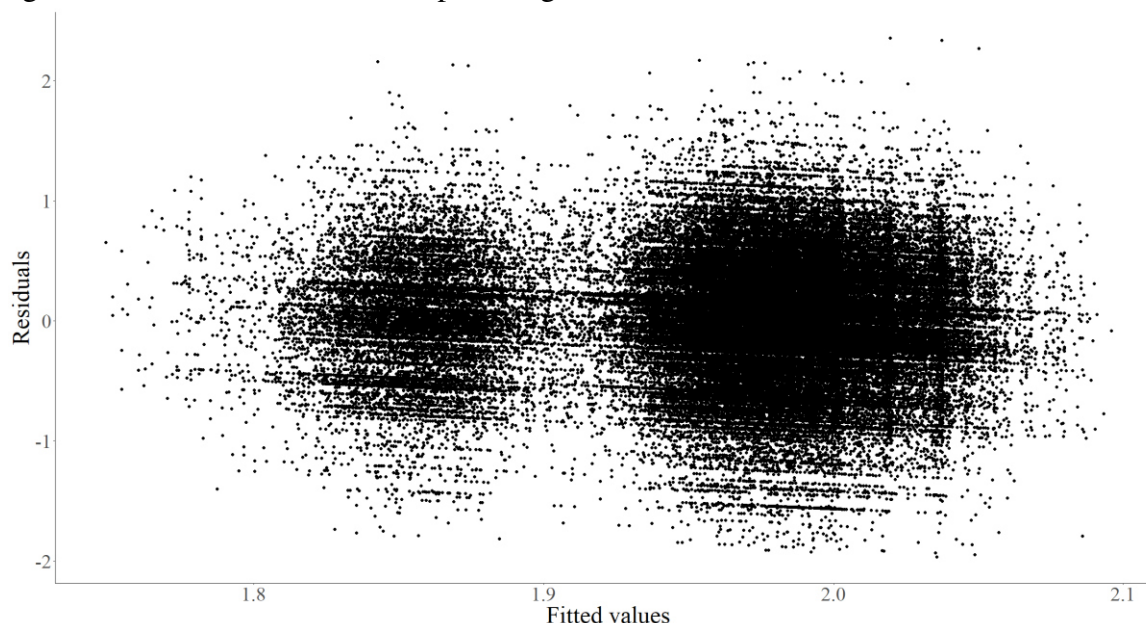
Figure A.10: QQ-plot of the residuals for general linear model



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a). Cases reduced to attacks.

Notes: The figure shows the quantile-quantile-plot of the residuals for the second part of the two-part model, the GLM. By comparing the empirical quantiles of the residuals with the quantiles of a normal distribution, the normality assumption of the residuals can be checked.

Figure A.11: Residuals vs. fitted plot for general linear model



Data: N = 96620. Own calculation based on data from the *ParLEE speeches* dataset (Sylvester, Greene, and Ebing 2022a) using the dictionary by Haselmayer and Jenny (2020) and the spacyr package (K. Benoit, Matsuo, and Gruber 2023). Supplemented with data from the state parliaments of the federal states (Land Burgenland 2024; Land Kärnten 2024; Land Niederösterreich 2024; Land Oberösterreich 2024; Land Salzburg 2024; Land Steiermark 2024; Land Tirol 2024; Land Vorarlberg 2024; Stadt Wien 2024), the Austrian National Council (Republic of Austria Parliamentary Directorate 2024a, 2024b), Statistik Austria (2023) and the Chapel Hill Expert Survey (Jolly et al. 2022a). Cases reduced to attacks.

Notes: The figure shows the residuals vs. fitted plot for the second part of the two-part model, the GLM. By comparing the fitted values and the residuals, the homoscedasticity assumption can be checked.